DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

June 25, 2012

Engineering/Planning Division
Geo-Environmental Engineering Branch

Ms. Lynne Jennings
EPA – New England, Region 1
5 Post Office Square – Suite 100
Mail Code OSRR7-3
Boston, Massachusetts 02109-3912

Mr. Len Pinaud
Massachusetts Department of Environmental Protection
20 Riverside Drive
Lakeville, Massachusetts 02347

Re: Impact Area Groundwater Study Program
USEPA Region I Administrative Orders SDWA 1-97-1019 & 1-2000-0014
Final Demolition Area 1 Environmental and System Performance Monitoring Report, Response Action Groundwater Treatment Systems, September 2010 to August 2011

Dear Ms. Jennings and Mr. Pinaud:

On behalf of the Army National Guard Impact Area Groundwater Study Program (IAGWSP), the U.S. Army Corps of Engineers (USACE) is pleased to provide the enclosed Final Demolition Area 1 Environmental and System Performance Monitoring Report, Response Action Groundwater Treatment Systems, September 2010 to August 2011, dated June 2012. Comments were received from U.S. Environmental Protection Agency (EPA) in a letter dated April 9, 2012, and from the Massachusetts Department of Environmental Protection (MassDEP) in a letter dated April 11, 2012. Approval of the MOR was received from the EPA in a letter dated June 6, 2012. The associated Project Note documenting the changes to the hydraulic and chemical monitoring networks is included as an appendix.

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Please contact Dave Hill of the IAGWSP office or Mark Anderson of USACE if there are any questions.

Sincerely,

H. Farrell McMillan, P.E.
Chief, Engineering/Planning Division

Enclosures

EPA 1 copy and 1 CD
MassDEP 1 copy and 1 CD

Copy Furnished:

IAGWSP: B. Gregson (letter only), Dave Hill (1 copy), and
M. Goulet (5 copies and 2 CD)
USACE Jay Ehret (1 copy), Mark Anderson (1 copy), Mike Kullbersh (1 copy), and
Marie Wojtas (1 copy & 1 CD)
EPA: Robert Lim (1 copy), MMR Field Office (1 copy and 1 CD), Erin Sanborn (1 CD)



Impact Area Groundwater Study Program

Final

Demolition Area 1
Environmental and System Performance Monitoring Report
Response Action Groundwater Treatment Systems
September 2010 to August 2011

Camp Edwards

Massachusetts Military Reservation

Cape Cod, Massachusetts

June 2012

Prepared for:

Army National Guard
Impact Area Groundwater Study Program
Camp Edwards, Massachusetts

Prepared by:

U.S. Army Corps of Engineers
New England District
Concord, Massachusetts

DISCLAIMER

This document has been prepared pursuant to government administrative orders (U.S. EPA Region I SDWA Docket No. I-97-1019 and 1-2000-0014) and is subject to approval by the U. S. Environmental Protection Agency. The opinions, findings, and conclusions expressed are those of the authors and not necessarily those of the Environmental Protection Agency.

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ABBREVIATIONS, ACRONYMS, AND SYMBOLS

AMEC	AMEC Earth and Environmental, Inc.
COC	Contaminant of Concern
DD	Decision Document
EPA	United States Environmental Protection Agency
EW	extraction well
ESPM	Environmental and System Performance Monitoring
ETI	Extraction, Treatment, and Infiltration
ETR	Extraction, Treatment, and Recharge
FPR	Frank Perkins Road
GAC	Granular Activated Carbon
gpm	gallons per minute
HMX	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine
IAGWSP	Impact Area Groundwater Study Program
INF	Influent
IW	Injection well
IX	Ion exchange
MassDEP	Massachusetts Department of Environmental Protection
µg/L	Micrograms per liter (parts per billion)
mg/L	Milligrams per liter (parts per million)
MMR	Massachusetts Military Reservation
MW	Monitoring well
RA	Response Action
RDX	hexahydro-1,3,5-trinitro-1,3,5-triazine
RRA	Rapid Response Action
RSD	Relative standard deviation
TNT	2,4,6-trinitrotoluene
SPM	System Performance Monitoring
USACE	United States Army Corps of Engineers

1.0 INTRODUCTION

This Demolition Area 1 Environmental and System Performance Monitoring (ESPM) report presents an assessment of the effectiveness of the Response Action (RA) to address the Demolition Area 1 groundwater contaminant plume. The RA consists of two previously existing extraction, treatment, and recharge (ETR) systems located at Pew Road and Frank Perkins Road (FPR) and a recently constructed Base Boundary extraction well, D1-EW-3, which went on-line on 22 June 2011. The Pew Road and FPR systems are components of the Rapid Response Action (RRA) ETR systems that first came on line on 8 September 2004. At that time, both the Pew Road System (100 gpm design flow) and the FPR System (330 gpm design flow) consisted of one and three containerized treatment units, respectively, with two extraction wells (D1-EW-2 at Pew Road and D1-EW-1 at Frank Perkins Road).

To accelerate mass capture for the FPR system, an additional extraction well (D1-EW- 503) was added in September 2006. This well is located approximately mid-way between FPR and Pew Road. The Decision Document (US Environmental Protection Agency (EPA), 2006) was signed by EPA on 1 November 2006. The EPA selected Response Action consisted of a four well extraction (Frank Perkins Road) system pumping and injecting groundwater at a rate of 808 gpm, and the Pew Road system pumping at 98 gpm. Additionally, the alternative included a contingency to add additional wells along the leading edge if the plume was found to migrate further than expected. The remaining two extraction wells comprising the FPR system (D1-EW-501 and D1-EW-502), located upgradient of extraction well D1-EW-1 went on line on 25 June 2007. The Demo 1 ETR systems (Frank Perkins and Pew Road) were optimized on 1 September 2009 as discussed in the applicable ESPM Report (USACE 2011) whereby extraction wells were cycled on and off in a rolling shut-down fashion from 1 September 2009 until 15 February 2011. This “Phase I” optimization activity continued until EPA/DEP approved implementation of the Phase II optimization. Phase II optimization consisted of reducing the pumping rate to the Frank Perkins Road system to a total of 500 gpm on a permanent basis. On 15 November 2010, EPA issued a letter invoking the Contingency Remedy clause of the Decision Document (DD). The letter required the installation of an extraction and treatment system that will prevent plume migration along a well transect near North Pond, characterization the off-base perchlorate contamination including alternatives for additional extraction and treatment for this contamination, and evaluation of the need to provide an alternate water supply for private or public wells that are at risk from off-base migration of perchlorate.

The source of the Demolition Area 1 groundwater plume is located south of the Camp Edwards Impact Area, and northwest of the intersection of Pocasset–Forestdale Road and Turpentine Road (Figure 1-1). Demolition Area 1 was used from the mid-1970s to 1997 for detonation and disposal of munitions, fireworks, explosives, and other items. Explosives and perchlorate remaining in the soil from those activities leached from the soil into the groundwater, creating the Demolition Area 1 plume. Soil remediation consisting of the excavation and thermal treatment of 18,500 cubic yards of soil and removal of approximately 11,388 munitions items from the source area to prevent further impacts to the groundwater was completed in 2004.

A “Leading Edge” investigation (IAGWSP, 2010) commenced in October 2010 with the installation of four borings (MW-543 through MW-546) adjacent to the base boundary with profile samples collected at 10-foot intervals. Perchlorate concentrations exceeded 2 µg/L from -5 feet msl to -95 ft msl at boring MW-545 with the maximum detected perchlorate concentration of 12.2 µg/L in a groundwater sample collected from MW-545M2 in December 2010. An investigation which currently consists of 11 off-base borings is ongoing to determine the off-site extent of perchlorate contamination. As of August 2011, a narrow but thick plume of perchlorate extends more than 1,750 feet to the west of the base boundary in the area of Lily Pond at concentrations greater than 2 µg/L.

This annual report focuses on the operation of the treatment systems, the effectiveness of plume capture, the identification of changes in the extent and concentration of the plume, any opportunities for optimization of the ETR systems, and any recommendations for changes in future monitoring. The current scheme for monitoring of the ETR systems is outlined in the Draft Remedial Action Performance Monitoring Work Plan (USACE, 2007). This report covers ETR systems operations from 1 September 2010 through 31 August 2011. Groundwater sampling data from September 2010 through August 2011 is included. Plume depictions are based on data collected through August 2011 and include synoptic water level data collected in December 2010 and April 2011, and system startup data for the Base Boundary extraction well and infiltration trench (ETI) in June 2011.

2.0 DEMOLITION AREA 1 ETR SYSTEMS OPERATION

The operating histories for the Pew Road and FPR ETR systems for the reporting period are presented in the following sections.

2.1 Pew Road Extraction, Treatment, and Recharge System

The Pew Road treatment system (location shown in Figure 2-1) consists of a modular treatment unit (MTU) housed in an 8-foot by 40-foot shipping container. The MTU at Pew Road is a portable self-contained treatment system designed to effectively remove explosives and perchlorate from groundwater at a flow rate up to 110 gallons per minute (gpm). The average operating flow rate during this reporting period was 103 gpm, derived solely from extraction well D1-EW-2. Treated effluent is discharged via an injection well (D1-IW-3).

The water treatment system housed in the Pew Road MTU is described by the process flow diagram shown on Figure 2-2. The treatment train consists of ion exchange (IX) to remove perchlorate followed by granular activated carbon (GAC) adsorption to remove explosives compounds (and also low concentrations of perchlorate if there is breakthrough from the IX vessels). The MTU contains two parallel sets of three pressure vessels each: an IX unit followed by a primary and then secondary GAC unit. The lead GAC vessel provides the initial stage of treatment for the removal of explosives compounds, and the secondary, or guard GAC vessel provides backup capacity, ensuring that any breakthrough of contaminants from the first two stages of treatment (IX and GAC) will be removed prior to discharge. Each IX vessel contains 29 cubic feet (cf) of SIR-110-HP resin manufactured by Resin Tech, a strong base anion resin, for a total capacity of 58 cf in the MTU. Each GAC vessel contains 1,000 pounds of virgin carbon (ACOL-GL60), for a total four-vessel capacity of 4,000 pounds.

The system operated reliably with an “up time” of 98.0% during this reporting period and 96.1% since startup in June 2007. Up-time is a measure of system reliability and is defined as the number of hours the system actively treats groundwater during a given time period divided by the number of elapsed hours during the period (expressed as a percentage). During this reporting period, the Pew Road system was down for 176.6 hours out of 8760 elapsed hours. A summary of the downtime for the Pew Road ETR system for this reporting period is presented in Table 2-1. Figure 2-3 provides a graphical presentation of system availability and downtime for this period as well as for the entire period since system startup (i.e., RRA and RA systems).

The largest individual causes of downtime during the reporting period were due to hurricane preparation in September 2010 and August 2011; carbon media change outs in November 2010 and April 2011; and a power outage in December 2010.

2.2 Frank Perkins Road Extraction, Treatment, and Recharge System

The FPR system is housed in an 11,000-square-foot concrete and metal building installed east of Frank Perkins Road near the junction with Pocasset-Forestdale Road (Figure 2-1). The primary components of the system include two parallel IX – GAC treatment trains (See the treatment process diagram in Figure 2-4). The influent flow is derived from four extraction wells

(D1-EW-1, D1-EW-501, D1-EW-502 and D1-EW-503) and is combined in an equalization tank and then split between the two parallel treatment trains (however, since the 2011 optimization only one train is in use). Each train includes 800 cubic feet of SIR-110-HP ion exchange resin (contained in two parallel 400-cubic foot IX resin vessels) followed by three 20,000-pound GAC vessels in series. The system also includes booster pumps, a bag filtration system, a backwash water tank, a backwash pump, and a settling tank. Treated effluent is discharged via two injection wells (D1-IW-1 and D1-IW-2).

As in the Pew Road system perchlorate is removed by the IX resin. The first two GAC vessels in series are responsible for the primary treatment of the explosive compounds, with the third (guard) GAC vessel available to ensure that all explosives and perchlorate are removed prior to discharge.

The treatment system has a total maximum water treatment capacity of approximately 1,000 gpm (500 gpm for each train); however, the capacity of the two injection wells is somewhat less. The flow rate during this reporting period departed from the initial design extraction rate (808 gpm) due to the September 2009 implementation of an optimization scheme designed to allow stagnation zones in between extraction wells to migrate to the next downgradient extraction well. The optimization scheme involved "rolling" monthly shut-downs of extraction wells D1-EW-1, D1-EW-501 and D1-EW-503. As a result, flow rates during this reporting period varied from 469 gpm to 628 gpm depending upon which well was shut down during each month.

The system operated reliably with an "up time" of 98.7% during this reporting period and 98.2% since RA startup in late June 2007. During this reporting period, the FPR system was down for 115.1 hours out of 8760 elapsed hours. A summary of the downtime for the FPR ETR system for this reporting period is presented in Table 2-1. Figure 2-5 provides a graphical presentation of system availability and downtime for this period as well as for the entire period since RA system startup.

2.3 Base Boundary Extraction, Treatment, and Recharge System

Based on data collected during the 2010 "Leading Edge" investigation (IAGWSP, 2010) USEPA ordered the installation of an extraction system that prevents further off-base migration of the Demolition Area 1 perchlorate plume. To meet this requirement a contingency ETR system was installed (location shown in Figure 2-1). This Base Boundary ETR system, consisting of extraction well D1-EW-3, a single MTU capable of treating approximately 65 gpm via a treatment train similar to other MTUs operating at MMR and an infiltration gallery located approximately 200 feet to the north of the MTU, was brought on-line on 22 June 2011 at pumping rate of approximately 30 gpm.

The new system was operated for approximately two months of this reporting period. During that time, the system was "up" approximately 90% of its available time.

3.0 EXTRACTION, TREATMENT, AND RECHARGE SYSTEMS SAMPLING AND MASS REMOVAL

3.1 Pew Road and Frank Perkins Road ETR System Monitoring Summary

Routine sampling frequencies for all Demo-1 Area treatment systems are monthly, broken down as follows:

- Perchlorate and explosives at the treatment system influent;
- Perchlorate in the IX unit effluent (Perchlorate after the lead GAC unit in the month following a perchlorate breakthrough of the IX unit);
- Explosives after the lead GAC unit; and
- Perchlorate and explosives at the system effluent.

The sampling schedules for the Pew Road and Frank Perkins Road ETR systems are presented in Table 3-1 and Table 3-2 and sampling results are included on Table 3-3 and Table 3-4.

Field parameters (dissolved oxygen, pH, specific conductivity, temperature, oxidation-reduction potential, and turbidity) are typically collected from the influent and effluent concurrently with all sampling events. Geochemical parameters (metals, hardness, chloride, sulfate, alkalinity, ammonia, nitrate/nitrite, phosphorus, total organic carbon, and total suspended solids) are analyzed on an as-needed basis should any problems develop within the treatment system. No geochemical parameters were measured during this sampling period for either the Pew Road or Frank Perkins Road ETR systems.

The current in-plant monitoring schedule allowed for sufficient time to schedule media change-out while still providing full treatment of the contaminated groundwater. No change to the in-plant sampling program is recommended at this time.

System performance for the Pew Road and Frank Perkins Road ETR systems are presented graphically in figures 3-1 through 3-6.

Summaries of the performance of the Pew Road and Frank Perkins Road ETR systems are presented in the following table (along with a summary of the new Base Boundary System, discussed further in Section 3.2):

System Performance Summary for September 2010 through August 2011

System Metric		Pew Road ETR	Frank Perkins Road ETR	Base Boundary ETR
System Up Time (%)				
This Reporting Period		98.0%	98.7%	~ 90%
Since System Startup		96.1%	98.2%	~ 90%
Breakthroughs / Media Changeouts				
RDX/HMX	Breakthrough(s)*	RDX on 6 Oct 2010, 9 Nov 2010, & 10 Mar 2011	RDX (0.311 ug/L) on 7 Feb 2011 @ FPR2-GAC-MID-A	None
	Changeout(s)	GAC on 18 Nov 2010 & 4 Apr 2010	No Changeout **	None
Perchlorate	Breakthrough(s)*	None	None	None
	Changeout(s)	None	None	None
Influent Concentration Range (ug/L)				
RDX		0.63 to 1.56	ND to 1.49	0.20 to 0.46
HMX		ND	ND to 0.89	ND
Perchlorate		7.8 to 11.3	0.66 to 1.23	2.5 to 5.7
Groundwater Treated (million gal)		54	281	3.2
Mass removed this reporting period (lbs)				
RDX		0.6	2.3	0.01
HMX		-	1.0	-
Perchlorate		4.1	2.0	0.08
Mass removed since startup (lbs) ***				
RDX		3.4	42	0.01
HMX		-	8	-
Perchlorate		32.7	69	0.08

* Breakthrough is defined as the detection of perchlorate at or above 0.35 µg/L or an explosive COC at or above its reporting limit of 0.20 µg/L in the effluent from a treatment vessel.

** No GAC changeout was performed in response to the 7 Feb RDX measurement, and no breakthrough was measured in subsequent monitoring rounds.

*** The combined Pew Road and Frank Perkins Road masses equal 96% of the perchlorate and 85% of the RDX originally estimated to be in the groundwater plume before treatment started.

3.2 Base Boundary Extraction, Treatment, and Recharge System

3.2.1 In-Plant Monitoring

Sampling frequencies at the Base Boundary system were different than for the other Demo Area 1 systems, since the Base Boundary system was just starting up this period. The sampling frequency for this period was as follows:

- D1-INF: Daily for the first week after startup, then weekly for the first month; then monthly each month after startup for perchlorate and explosives at the influent;
- D1-MID1: Daily for the first week after startup, then weekly for the first month; then monthly each month after startup for perchlorate at the post-IX unit sampling location;
- D1-MID2: Daily for the first week after startup, then weekly for the first month; then monthly each month after startup for perchlorate and explosives at post-lead GAC unit sampling location (sample D1-MID2); and
- D1-EFF: Daily for the first week after startup, then weekly for the first month; then monthly each month after startup for perchlorate and explosives at the influent.

Field parameters (dissolved oxygen, pH, specific conductivity, temperature, oxidation-reduction potential, and turbidity) were collected from the influent and effluent during some of the sampling events. Geochemical parameters including metals, hardness, chloride, sulfate, alkalinity, ammonia, nitrate/nitrite, phosphorus, total organic carbon, and total suspended solids were analyzed once during the first week of system startup. Results are included on Tables 3-5 and 3-6.

3.2.2 Influent

The concentration of perchlorate in the Base Boundary System influent was 5.7 µg/L at system startup, declined fairly quickly during the first week of operation to 3.4 µg/L, and then declined more gradually to approximately 2.5 µg/L after two months of pumping. RDX, the only explosive compound detected, was 0.46 µg/L at startup, declined to 0.26 µg/L after one week, and then stabilized near the reporting limit of 0.20 µg/L over the remainder of the two months of pumping. Graphs of influent concentrations over time, volume of groundwater treated, and mass removal rates can be found on Figures 3-7, 3-8, and 3-9, respectively

3.2.3 Breakthrough of COCs

During the two months of operation of the Base Boundary System, no breakthrough of COCs was detected.

3.2.4 Sampling Frequency Evaluation

During this startup period for the Base Boundary ETR System, the sampling schedule was more frequent than is necessary for routine monitoring. Going forward, a monthly monitoring

schedule, similar to the other Demo 1 Area ETRs will be implemented (as described in Section 3.1) to allow for sufficient time to schedule media change-out while still providing full treatment of the contaminated groundwater.

4.0 AQUIFER HYDRAULIC MONITORING

Groundwater elevations are used to assess the impact of the extraction and injection well fields on the movement of groundwater in the aquifer and to determine if the ETR systems are capturing the contaminated portions of the aquifer as intended. The hydraulic monitoring data are used to evaluate groundwater capture by plotting potentiometric surface maps of the stressed areas of the aquifer and to evaluate seasonal trends. For this reporting period there were two synoptic water level rounds collected consistent with the approved hydraulic monitoring program for the Frank Perkins Road and the Pew Road systems. Similarly, as part of the system start-up of the base boundary extraction well, manual water levels and water levels collected from a series of pressure transducers/data loggers were reduced in order to determine aquifer hydraulic properties in the vicinity of the new extraction well, D1-EW-3.

4.1 Groundwater Level Analysis – Frank Perkins and Pew Road Systems

Synoptic water levels were collected on 20 December 2010 and 11 April 2011. Water levels were collected manually from 112 monitoring well screens, extraction and injection wells, and staff gauges located with North Pond on 20 December 2010. On 11 April 2011 water levels were collected from 125 monitoring well screens, extraction and injection wells, and the North Pond staff gauge. Figure 4-1 shows the locations of the wells in the hydraulic monitoring program. Table 4-1 identifies the well construction details for those wells in the hydraulic monitoring program. The Demo 1 ETR systems (Frank Perkins and Pew Road) were optimized on 1 September 2009 as discussed in the applicable ESPM Report (USACE 2011) whereby extraction wells were cycled on and off in a rolling shut-down fashion from 1 September 2009 until 15 February 2011. Commencing 1 September 2009 extraction well D1-EW-501 (191 gpm) went off-line for one month while the other three extraction wells (D1-EW-1 (161 gpm) and D1-EW-502 (251 gpm) continued pumping. On 1 October 2009, D1-EW-501 went on-line while the next downgradient well, D1-EW-502 went off-line and D1-EW-1 continued pumping. Similarly, on 1 November 2009, D1-EW-502 went on-line and D1-EW-1 went off-line while D1-EW-501 continued pumping. During Phase I optimization activities extraction wells D1-EW-503 (205 gpm) and Pew Road (100 gpm) systems pumped at their design rates. Phase I of the optimization process reduced flow rates to between 555 and 645 gpm (maximum well capacity with no downtime), down from the design rate of 808 gpm. The Phase I optimization activities continued until EPA/DEP approved implementation of Phase II optimization activities on 15 February 2011. Phase II optimization activities consisted of reducing the pumping rates for the Frank Perkins Road system to 500 gpm on a permanent basis.

During the collection of the 20 December 2010 synoptic water level measurement extraction well D1-EW-501 (191 gpm) was off-line. The average monthly flow rate for the Frank Perkins Road system was 567 gpm (92% of the design rate), whereas, Pew Road was pumping at its design capacity (100 gpm).

Water levels from the extraction wells and monitoring wells within the systems' zone of influence were used to create groundwater contours (Table 4-2). Those wells used in the contouring are bolded in Table 4-2. Injection well water levels were not used because these water levels are often not representative of water levels in the aquifer due to inefficiency of the well screens.

Figure 4-2 (top pane) depicts groundwater contour maps with associated flow vectors for 20 December 2010. As depicted by the contours and associated flow vectors there is hydraulic capture by the Frank Perkins Road system (with the exception of D1-EW-501 which was offline during the synoptic gauging round due to implementation of Phase I optimization activities) and Pew Road systems.

On 11 April 2011, all extraction wells were on-line and pumping at Phase II optimization rates (D1-EW-1 (150 gpm), D1-EW-501 (150 gpm), D1-EW-502 (100 gpm), and D1-EW-503 (100 gpm)). As depicted in Figure 4-2 (bottom pane), the groundwater contour maps show depressions at the extraction wells with flow converging at the wells.

Water levels from wells used to create Figure 4-2 ranged as follows:

20 December 2010

50.3 ft msl (MW-353M1) to 71.9 ft msl (MW-79M1)

11 April 2011

50.5 ft msl (MW-353M1) to 70.9 ft msl (MW-79M1)

In comparison, water levels from the prior synoptic water level round were as follows:

7 April 2010

52.28 ft msl (MW-353M1) to 71.44 ft msl (MW-79M1)

The hydraulic gradient for wells located upgradient of Frank Perkins Road for the two events were essentially all the same with a gradient change of approximately 0.00075 feet per foot. The groundwater flow direction was essentially due west. Similarly, the hydraulic gradient west of Pew Road varied narrowly over the year from approximately 0.0030 feet per foot to 0.0035 feet per foot. This gradient is approximately 4.5 times that of the gradient upgradient of Frank Perkins Road and reflects a lowering of the hydraulic conductivity of the aquifer materials coupled with a thinner section of saturated sediments within the moraine. The hydraulic gradient between Frank Perkins Road and Pew Road ranges from approximately 0.00175 feet per foot to 0.002 feet per foot. The groundwater flow direction west of Pew Road was predominantly westerly in December 2010 and April 2011.

4.2 Seasonal Groundwater Level Changes

The difference in water levels between 7 April 2010 and 20 December 2010 for water levels across the Demolition Area 1 gauging network ranged from an increase of approximately 0.45 feet at the MW-79 well cluster located upgradient of the source area (Figure 4-1 and 4-2) to a decrease of 2.07 feet at MW-542M1 located on the western side of the gauging network. For the same time period, USGS wells located near the Top of the Mound (TOM) ranged from 1.49 feet (MW-126S) to -0.59 feet (90MW0063). Demolition Area 1 background monitoring wells located along Frank Perkins Road, north of D1-EW-1, showed an increase of approximately

0.85 feet and 0.55 feet at well clusters MW-46 and MW-47, respectively. Water level changes between the Demolition Area 1 source area and Pew Road went from a 0.45 foot increase to a 0.20 foot decline, this distance spans approximately 1.3 miles. Whereas, between Pew Road and MW-542M1 the water levels decreased between 0.2 foot and 2.07 foot over a distance of approximately 0.5 mile.

The difference in water levels (and not elevations) between 20 December 2010 and 11 April 2011 for water levels across the Demolition Area 1 gauging network showed a decline in the potentiometric surface of approximately 0.95 feet at the MW-79 well cluster located upgradient of the source area (Figure 4-1 and 4-2) to an increase of approximately 0.15 feet at MW-353 well clusters located on the far western side of the gauging network. For the same time period, all USGS wells located near the Top of the Mound (TOM) showed a decline in water levels ranging from 0.34 feet (90MW0063) to 1.19 feet (MW-126S). Demolition Area 1 background monitoring wells located along Frank Perkins Road, north of D1-EW-1, showed a decline of approximately 1.1 feet and 0.85 feet at well clusters MW-46 and MW-47, respectively. Water level changes between the Demolition Area 1 source area and Pew Road declined from 0.95 foot to 0.45 foot which spans a distance of approximately 1.3 miles. Whereas, between Pew Road and MW-353 well cluster the water level change went from a decline of 0.45 foot to an increase of 0.15 foot over a distance of approximately 0.7 miles. In general, aquifer sediments within the Mashpee Pitted Plain (outwash deposits) appear to respond differently to recharge events than do those wells completed in moraine (Buzzards Bay) deposits.

4.3 Capture Zone Analysis

The groundwater contour maps (Figure 4-3) show that the extraction system is currently capturing the perchlorate and RDX plumes upgradient of Pew Road under optimized conditions based solely on hydraulic head data. For purposes of further quantifying capture zone dimensions, two different models were employed. The regional three dimensional steady-state numerical model (MODFLOW/MODPATH) was used in conjunction with the Demolition 1 site-specific numerical model, as well as a two dimensional (2-D) analytical model, WINFLOW (AQUIFERWIN32 - Environmental Simulations, Inc., 2007).

The two dimensional analytical model can develop a capture zone that considers the spatial locations of the extraction and injection wells, and the individual pumping/injection rates. This model uses a uniform hydraulic gradient and direction, a constant aquifer thickness, and accounts for a single recharge value for the site. Emphasis was placed on calibrating the analytical model to water levels along and east of Frank Perkins Road since the model can only simulate a single recharge value. Input parameters for the analytical model simulations are presented in Appendix A. In the simulations, aquifer recharge was approximately 30 inches (April 2011). This recharge rate was developed from the MMR-10NW regional model a three dimensional numerical model with the top of mound at an elevation of approximately 73 feet, measured on 11 April 2011.

Figure 4-3 (top pane) depicts the simulated capture zone using the input parameters provided in Appendix A with a recharge rate equivalent to 30 inch per year. For the 11 April 2011 simulation the model simulated the four wells comprising the Frank Perkins Road system extracting groundwater at 500 gpm (Phase II optimized rates). The analytical model depicts that the perchlorate plume is fully encompassed by the capture zone. Similarly, Figure 4-3 (bottom

pane) depicts the capture zone from the numerical model. The numerical model was run at the same extraction rates except that the annual recharge rate was 27 inch, the recharge value used to calibrate the subregional model to 2003/2004 conditions. The general shapes of the capture zones between the numerical model and the analytical model depict that the perchlorate and RDX plumes are being captured under varying recharge conditions.

In summary, since the horizontal hydraulic gradient does not change significantly seasonally, and water level fluctuations were within approximately 3 feet (maximum range in water level change) the aquifer thickness changed by less than 2% of its saturated thickness. Therefore, horizontal capture zone dimensions predicted by both models do not vary significantly seasonally. These analyses show that, under the optimized pumping rates the FPR treatment system is capturing the perchlorate and RDX plumes under observed water level conditions.

4.4 Groundwater Level Analysis – Base Boundary System

Prior to startup of the Base Boundary extraction well (D1-EW-3), a series of pressure transducers were installed in the extraction well and monitoring wells MW-544M2, MW-545M2/M4, MW-546M2, 95-14, and piezometer PZD1001 located adjacent to the infiltration trench. In addition, manual water levels were collected at system start-up on 22 June 2011. Manual water levels were collected from 30 wells including three staff gauges. Figure 4-4 shows the locations of the well for which manual water levels were collected along with those wells that data-loggers were installed. Prior to system start-up manual water levels were obtained from all wells. Table 4-3 provides a summary of the manual water level elevations. Appendix B provides graphs of the water level changes for those wells for which data-loggers were installed. All pressure transducers were removed from the wells on day 15. The startup flow rate ranged between 50 gpm and 55 gpm. The data from 5 July 2011 (day 14) was plotted as depicted in Figure 4-5 (top pane). The flow rate at the time of measurements was approximately 55 gpm. Flow vectors indicate that there is capture at the well. However, as indicated in the figure, the plume as depicted through August 2011 is slightly wider to the south than at the time of system design in March 2011. The perchlorate plume as depicted in March 2011 is depicted in Figure 4-5. In March 2011, concentrations of perchlorate in wells MW-258M1 and MW-544M1 were below 2 μg/L. The expanded plume width to the south, approximately 150 feet, indicates that capture of recent concentrations seen at MW-544 may not be occurring.

Water levels for day 27 (19 July 2011) were plotted. Data used are depicted in Figure 4-5 (bottom pane) and presented in Table 3-3. On the day the measurements were collected the extraction well D1-EW-503 was pumping at 30 gpm. Flow vector analysis indicates that the capture zone is narrower than under the 55 gpm rate and is likely 150 feet north of MW-544 and as such full capture to the south of MW-544 is likely not occurring. A review of the flow logs indicate that on day 16 (7 July 2011) the flow rate in the extraction well was reduced to approximately 30 gpm and remained that way through the remainder of the reporting period.

4.5 Hydraulic Conductivity Analysis – Base Boundary System

As indicated in the previous section as part of system startup pressure transducers/data-loggers were placed in the extraction well and six wells/piezometers. Time-drawdown data for the wells were analyzed using the software AQTESOLV (HydroSOLVE, Inc.). The data plots are provided in Appendix C. The data was reviewed using multiple data reduction methods (Theis, Cooper-Jacobs, and Neuman). Additionally, a distance-drawdown plot was also conducted. The results of the tests are summarized in Table 4-4.

The hydraulic conductivities of the materials stressed during system start-up were fairly consistent, and for practical purposes may be considered similar. Estimated hydraulic conductivity values ranged from 70 feet/day (ft/day) at MW-544M2 to 120 ft/day at MW-545M4. Consistent results were obtained from time-drawdown (T-D) and step test analysis at the extraction well (D1-EW-3) with values determined from the step-test of 95 ft/day and 105 ft/day from the T-D graphs. A distance-drawdown (D-D) using wells along the base boundary from south to north (MW-544M2, MW-545M2/M4, D1-EW-3, and MW-546M2). The D-D graph indicated that the aquifer response to pumping yielded an overall hydraulic conductivity of 100 ft/day, consistent with the T-D graphs for many of the individual wells (Table 4-4 & Appendix C).

5.0 PLUME CONCENTRATION MONITORING

The extent and concentration of plume contaminants are monitored through analysis of groundwater samples collected from the network of monitoring wells in and around the plume. Samples are analyzed for explosives by method 8330 and/or perchlorate by method 6850/6860 (and previously by EPA method 314.0). The chemical sampling schedule for the current reporting period is presented in Table 5-1. A summary of perchlorate, RDX and HMX concentrations detected in groundwater is presented in Table 5-2. Table 5-3 presents all explosives compounds detected in the monitoring/extraction wells.

Revised perchlorate and RDX plume shells (Figure 5-1 and Figure 5-2) were prepared based on the groundwater concentrations detected through August 2011 to delineate perchlorate concentrations above 2 μg/L and RDX above 0.6 μg/L. Forward particle tracking of chemical data from previous sampling events was used to "fill in" areas within the plume where monitoring wells are not available. Where appropriate, the plume delineations also consider the effects of groundwater extraction.

The following sections highlight the more significant changes in plume concentrations over the past two years, where applicable. The following discussion of plume monitoring results is divided into three zones (Figures 5-1 and 5-2). Zone 1 is the area from the former source area to Frank Perkins Road. Zone 2 is the area downgradient of Frank Perkins Road up to Pew Road and Zone 3 is the area downgradient of Pew Road and includes the base boundary extraction well and the off-base investigation west of Route 28.

5.1 Zone 1 – Upgradient of Frank Perkins Road

5.1.1 Perchlorate

Perchlorate concentrations at the source area and throughout the most upgradient 2,500 feet of Zone 1 have generally continued to decrease. Source area wells MW-19S, MW-73S, and MW-31S indicate that perchlorate concentrations are less than 2 μg/L beneath the former source area. As depicted in Figure 5-1, the upgradient extent of the perchlorate plume as of August 2011 is approximately 300 feet upgradient of extraction well D1-EW-501. This is based on forward migrated data and inferences from measured influent concentrations of 0.622 μg/L in extraction well D1-EW-501. Figure 5-1 uses color coded well symbols to depict the concentration detected in each well. The maximum concentration detected during the reporting period is used to assign a color to the well symbol. As presented in Figure 5-1 no perchlorate concentrations in wells upgradient of extraction well D1-EW-501 exceeded 2 μg/L (Table 5-2). Figure 5-3 shows a cross-sectional view along the centerline of the perchlorate plume.

In general, wells upgradient of extraction well D1-EW-502 show significant decreases in concentration as perchlorate is being extracted from the aquifer. Perchlorate in well MW-129M1 decreased from 0.942 μg/L to 0.04 J μg/L between April 2009 and April 2010 and remained at approximately 0.102 μg/L (May2011). Similarly, perchlorate concentrations continued to decrease from 1.99 μg/L to less than 0.1 μg/L in MW-129M2 between April 2009 and April 2011. Similarly, perchlorate decreased from 1.73 μg/L to 0.7 μg/L in MW-114M2 and from 4.95 μg/L to 0.401 μg/L in MW-114M1 between April 2009 and April 2011. Perchlorate concentrations have

generally decreased from 2.97 μg/L in May 2010 to 1.57 μg/L in August 2011 at extraction well D1-EW-502 (Appendix D and Table 5-2). The only well upgradient of D1-EW-502 that generally shows an increasing trend is MW-34M1. This well has increased from 0.86 μg/L (April 2008) to above 2 μg/L in April 2010 (3.7 μg/L) and April 2011 (3.3 μg/L), respectively (Figure 5-1). However, as indicated on Figure 4-3, this well is within the capture zone of D1-EW-502.

Perchlorate at monitoring well MW-139M2, located upgradient of extraction well D1-EW-1, decreased from 7.23 μg/L (April 2010) to 0.015 J μg/L (April 2011). Concentrations in the monitoring well cluster MW-165 located adjacent to the extraction well D1-EW-1 had a maximum detected concentration of 0.233 μg/L in April 2011 (MW-165M2). Concentrations in extraction well D1-EW-1 continue to decrease and were detected at a concentration of 0.515 μg/L (August 2011) down from 1.52 μg/L (September 2010) (Table 5-2).

5.1.2 RDX

Concentrations of RDX at well MW-19S beneath the former source area have typically been above 10 μg/L since 2008 with a detected concentration of 12.3 μg/L in April 2011. The other source area well, MW-73S has generally been above 2 μg/L since December 2010 increasing from 1.22 μg/L in April 2010 (Appendix D and Table 5-2). Figures 5-2 and 5-4 depict the RDX distribution in plan and cross sectional view along the centerline of the plume. Similar to Figure 5-1 maximum detected concentrations for the reporting period are color coded on Figure 5-2. Approximately 500 feet downgradient of the source area concentrations in MW-31M increased from 0.221 μg/L in November 2009 to 6.88 μg/L in April 2011. However, as recently as April 2009 the concentration in this well was above 20 μg/L. Concentrations have decreased in the shallow well (MW-31S).

Concentrations of RDX in well MW-76M1 have decreased from above 10 μg/L in April 2010 to 3.6 μg/L in April 2011. A decline of a similar magnitude was also noted in MW-76M2. Historically, concentrations have fluctuated over a broad range in MW-76S, however the April 2011 concentration 0.29 μg/L was an historic low. Concentrations declined significantly at MW-77M2 from above 30 μg/L in November 2009 to 0.65 μg/L in April 2011, another historic low. RDX concentrations measured in extraction well D1-EW-501 remained fairly consistent at approximately 2 μg/L, except for the sample collected in January 2011, upon system restart, where a concentration of slightly above 4 μg/L was detected (Table 5-2).

Concentrations of RDX in monitoring wells upgradient of extraction well D1-EW-502 have decreased as the treatment system removes contaminants from the aquifer. RDX levels in monitoring well MW-129M2 continue to remain non-detect. In 2008 concentrations in the well were above 60 μg/L. Similarly, concentrations have remained non-detect in the M1/M3 wells since 2009. RDX concentrations in MW-114M2 have declined from 102 μg/L in January to non-detect between April 2010 through April 2011. Between April 2009 and April 2011 RDX concentrations have decreased from 4.54 μg/L to non-detect in MW-114M1. Influent concentrations at extraction well D1-EW-502 declined from 6.91 μg/L in April 2008 to below 2 μg/L in August 2011 (Appendix D and Table 5-2).

RDX samples collected from extraction well D1-EW-1, decreased from 0.975 μg/L to 0.792 μg/L between June 2009 and September 2010 and continue to decline (0.144 J μg/L – August 2011).

Similarly, during the same period, concentrations of RDX in wells upgradient and adjacent to D1-EW-1 remained non-detect (MW-165M1/M2) while MW-139M2 hovered around non-detect (Table 5-2).

5.1.3 Other COCs

The explosive compounds HMX, TNT, 2A-DNT, 4A-DNT, and 2,4-DNT were detected in groundwater samples from Zone 1 during the reporting period. HMX was detected in 21 samples collected from 9 wells at concentrations ranging from 0.349 µg/L to 10.4 µg/L (MW-76M2). No concentrations exceeded the MCP GW-1 standard of 200 µg/L. TNT was detected in four samples, two from MW-19S and two from MW-31S. However, only the sample collected from MW-31S in December 2010 exceeded the remediation goal of 2 µg/L. 2A-DNT was detected in 9 samples obtained from 5 wells at concentrations ranging from 0.069 J µg/L to 0.942 µg/L (MW-31S). 4A-DNT was detected in 13 samples obtained from 7 wells at concentrations ranging from 0.078 J to 0.432 µg/L (MW-77M2). Maximum concentrations of 2A-DNT and 4A-DNT were below the screening level of 73 µg/L. 2,4-DNT was detected in two samples from well MW-31S. The sample collected in December 2010 contained 2,4-DNT at 0.292 µg/L, above the remediation goal of 0.25 µg/L as specified in Decision Document (USEPA 2006). The sample collected from the well in April 2011 was below the remediation goal (Table 5-3).

5.1.4 TAL Metals

Per the Draft Remedial Action Performance Monitoring Work Plan (USACE 2007) TAL metals are collected annually from the groundwater beneath the source area in wells MW-19S and MW-73S. Samples were analyzed for both total and dissolved metals and are presented in Table 5-4. None of the metals analyzed exceeded the MCP GW-1 standards.

5.2 Zone 2 - Upgradient of the Pew Road System and Downgradient of Frank Perkins Road

5.2.1 Perchlorate

Monitoring well MW-210 is located approximately 700 feet downgradient of the FPR extraction well D1-EW-1 (Figures 5-1 and 5-3). Perchlorate concentrations have remained fairly consistent at approximately 3 µg/L since the end of November 2009. However, this is a substantial decline from 243 µg/L in April 2007 (Appendix D). Concentrations in the M1 screen continued to decrease from 8.26 µg/L in April 2008 to 0.288 µg/L in April 2011. Perchlorate concentrations in D1-EW-503 have remained about the same ranging from approximately 0.35 µg/L and 0.5 µg/L between June 2009 and August 2011. However, this is a significant decline from 3.98 µg/L in April 2008.

Influent perchlorate concentrations at the Pew Road extraction well D1-EW-2 have decreased from approximately 11 µg/L in September 2010 to slightly below 8 µg/L in August 2011 (Figure 3-1). Concentrations in monitoring well MW-211M1, located adjacent to the Pew Road extraction well has declined from slightly below 100 µg/L (May 2008 through April 2010 to approximately 60 µg/L in April 2011. In the prior reporting period (USACE 2011) it was noted

that perchlorate was detected in MW-341M3 above 2 µg/L and that there may not be hydraulic capture at this well under the historically high water table conditions that prevailed at that time. However, perchlorate results for December 2010 (1.58 µg/L) and April 2011 (0.984 µg/L) show concentrations below 2 µg/L and water levels plotted for this well in proximity to extraction well D1-EW-2 infers that there is hydraulic capture (Figure 4-2).

5.2.2 RDX

RDX concentrations in monitoring well MW-210M2 ranged between 0.4 µg/L and 0.6 µg/L between December 2008 and April 2010. Samples collected from this well in December 2010 and April 2011 have been non-detect (Table 5-2 and Appendix D). RDX concentrations in extraction well D1-EW-503 have been non-detect since June 2009. These data suggest that the high concentrations of RDX previously detected in this zone have been removed by well D1-EW-503. Further migration of RDX into Zone 2 is not anticipated as the upgradient extraction along FPR (D1-EW-1) continues to remove mass from the aquifer (Figure 5-2 and Figure 5-4).

RDX influent concentrations at D1-EW-2 at Pew Road measured 1.41 µg/L in September 2010 and 1.15 µg/L in August 2011. Generally, RDX influent concentrations have decreased (Figure 3-1). RDX concentrations in monitoring well MW-211M1 have ranged between 15 µg/L and 22 µg/L between April 2010 and April 2011. However, since 2008, RDX concentrations have generally increased.

5.2.3 Other COCs

HMX was the only other explosive compound detected in groundwater from Zone 2. HMX was detected in two samples collected from MW-211M1 at approximately 0.9 µg/L in the December 2010 and April 2011 samples (Table 5-2). These concentrations are below the MCP GW-1 standard of 200 µg/L.

5.3 Zone 3 – Downgradient of Pew Road

In January 2010, during the installation of MW-532, groundwater profile samples were collected. Perchlorate results at or above 2 µg/L were detected from -18 ft msl to -88 ft msl. Two well screens (M1/M2) were installed at this location to monitor the perchlorate contamination. Monitoring well samples were collected in April and August 2010 with maximum detected concentrations ranging between 5 and 8 µg/L (Appendix D). A Leading Edge investigation commenced during this reporting period, in October 2010, with four borings adjacent to the base boundary (MW-543 through MW-546). Profile samples were collected at 10-foot intervals in each boring. Perchlorate concentrations exceeded 2 µg/L from -5 feet msl to approximately -95 ft msl at boring MW-545 with the maximum detected perchlorate concentration of 12.3 µg/L in a sample obtained from -47 to -51 ft msl. Distances between borings were approximately 150 feet.

None of the profile results obtained from MW-543, MW-544 or MW-546 exceeded 1 µg/L (Table 5-5). Four monitoring wells (M1/M2/M3/M4) were installed at boring MW-545. Two monitoring wells were installed at MW-543 (M1/M2) and MW-546 (M1/M2), and three wells (M1/M2/M3) were installed at MW-544. The locations of the borings/wells are depicted in Figure 5-1 and in cross-sectional view (Figure 5-5).

In a letter dated 15 November 2010 the USEPA ordered that an extraction system that prevents further off-base migration of the Demolition Area 1 perchlorate plume be installed within six months and an investigation of the extent of any off base contamination ensue.

As of the end of the current reporting period the off-site investigation consisted of 11 profile borings (DP-551 through DP-560, and DP-565). The location of the off-base profile samples are depicted in Figure 5-1. The profile samples obtained from DP-551, DP-552, DP-553 and DP-555 reached maximum depths ranging from approximately -35 ft msl (DP-553) to -65 ft msl (DP-552). The maximum perchlorate concentrations in DP-551, DP-552 and DP-553 did not exceed 0.25 µg/L. The profile samples from boring DP-555 extended to -45 ft msl with a maximum perchlorate concentration of 1.12 µg/L. The aforementioned borings were advanced using a direct push rig. The remainder of the borings were completed using a sonic drill rig and advanced either to bedrock or to a confining clay layer. The seven remaining borings reached maximum depths ranging from -130 ft msl (DP-558) to -170 ft msl (MW-565). As of August 2011, the perchlorate plume extended approximately 1800 feet beyond the base boundary. Profile borings with perchlorate detections above 2 µg/L were DP-554, DP-556, DP-558, and MW-559. Table 5-5 provides the profile results from the off-site investigation. A longitudinal cross-section depicting the perchlorate plume west of MW-225 and extending off-base is presented in Figure 5-6.

Only profile samples obtained from DP-556 and DP-558 contained RDX at a concentration exceeding the risk-based concentration of 0.6 µg/L. The maximum detected RDX concentration in a profile sample was 0.84 µg/L in DP-558. The off-base extent of the RDX plume based on profile results are depicted in Figure 5-2. As of the end of the reporting period the only off-base well installation was at location DP-554, where two monitoring wells (MW-554M1/M2) were installed.

The following discussion presents the perchlorate, RDX and other COCs for monitoring wells installed west of Pew Road.

5.3.1 Perchlorate

The perchlorate plume west of Pew Road based on data through August 2011 measures approximately 4500 feet in length by approximately 500 feet in width in the vicinity of MW-532 and extends approximately 1800 feet beyond the base boundary. As depicted in Figure 5-1, during the reporting period perchlorate was detected above 2 µg/L in six well clusters (11 wells). The wells from east to west are: MW-258M1, MW-532M1/M2, XX9514 (95-14), MW-544M1, MW-545M1/M2/M3/M4 and MW-554M1/M2 (Figure 5-1). The maximum detected perchlorate concentration west of Pew Road was 21.2 µg/L (MW-532M2). Of notable interest is that the plume at MW-545 is over 100 feet thick (Figure 5-5). Concentrations in well 95-14, located approximately 250 feet east of MW-545 increased from 0.21 µg/L in November 2009 to 9.59 µg/L in August 2011. Additionally, well MW-544M1 increased from 0.78 µg/L in December 2010 to 5.8 µg/L in June 2011 before decreasing to 4.14 µg/L (3.37 µg/L – Field Duplicate) in July 2011 (Table 5-2 and Appendix D).

5.3.2 RDX

RDX was detected in monitoring wells MW-532M2 and MW-545M2/M3 at a concentration exceeding 0.6 µg/L. RDX was detected in MW-532 in December 2010 at 0.833 µg/L. RDX was detected at 1.08 µg/L in MW-545M2, the maximum detected RDX concentration during the reporting period. Similarly, RDX was detected at 0.85J µg/L in MW-545M3 in December 2010. Subsequent samples collected during the reporting period were below 0.6 µg/L. RDX plumelets downgradient of MW-532 measure approximately 275 feet in length and approximately 550 feet in length in proximity to MW-545 (Figure 5-2 and Table 5-2, Appendix D).

5.3.3 Other COCs

No other COCs were detected in any groundwater sample collected from Zone 3 during this reporting period (Table 5-2).

6.0 UPDATE OF THE FATE AND TRANSPORT MODEL

The model-predicted influent concentrations of perchlorate and RDX and contaminant mass removal for the Demolition Area 1 treatment systems were compared to measured influent concentrations and actual contaminant mass removal in order to determine the accuracy of the numerical transport model and its ability to make future predictions.

The plume shell used in the analysis was constructed with data through 31 August 2009 for perchlorate and RDX. As such, mass removal values presented correspond with the start of Phase I optimization activities (1 September 2009) and include flow rate changes incorporated as part of Phase II optimization activities commencing 15 February 2011.

Mass removal and perchlorate and RDX influent data are presented separately for the Frank Perkins Road and Pew Road systems separately as the data is collected separately. At the Pew Road system a single MTU is used to treat groundwater extracted from well D1-EW-2. Whereas, for the Frank Perkins Road system extraction wells D1-EW-1, D1-EW-501, D1-EW-502, and D1-EW-503 are blended together and a single influent measurement is obtained monthly. However, as discussed in Section 5, individual groundwater samples are collected three times per year in order to assess model predicted concentrations.

6.1 Observed Versus Model Simulated Perchlorate Distribution

This section describes the observed perchlorate plume through 31 August 2011 compared to the model simulated perchlorate plume. As indicated, perchlorate data collected through 31 August 2009 was used to develop the MT3D transport simulation that predicts the distribution of the plume through 31 August 2011. The observed plume distribution includes perchlorate data through 31 August 2011. Figure 6-1 (top pane) depicts the observed perchlorate plume, and Figure 6-1 (bottom pane) depicts the model-predicted perchlorate plume distribution. Both the observed perchlorate and model simulated plumes are fairly representative of one another upgradient of Pew Road. Subtle differences are noted in the areas of well clusters MW-34 and MW-210 where the measured distribution depicts a plumelet (MW-34) or where the plume extends further upgradient (MW-210). In the case of concentrations measured/predicted between 2-15 µg/L (upgradient of the Pew Road system), the plumes are very comparable.

The measured versus predicted perchlorate plume west of MW-225 do not show consistent plume dimensions as the plume shell developed with perchlorate data through 31 August 2009 had not identified this area as being contaminated at concentrations currently delineated. This area has been the focus of a leading edge investigation and recent installation of a base boundary extraction well (D1-EW-3) which went on-line 22 June 2011. Upon completion of the leading edge investigation, which is currently focusing on off-base perchlorate distribution and not depicted in Figure 6-1 (top pane), a new plume shell incorporating the area west of MW-225 and including the off-base portion will be included in a plume shell update.

6.2 Perchlorate Mass Removal and Influent Concentrations – Frank Perkins Road System

During this reporting period (1 September 2010 through 31 August 2011), 1.97 pounds of perchlorate were removed from the aquifer at the Frank Perkins Road system. This is in comparison to compared to 1.63 pounds simulated by the model. For the entire model simulation (two years), the model predicted 4.88 pounds compared to 5.18 pounds measured. Cumulative perchlorate mass removed since RRA startup through 31 August 2011 is approximately 68.9 pounds. Figure 6-2 (top pane) shows the measured and simulated perchlorate mass beginning September 2009. As noted by the slopes in the measured and model predicted lines, the flow/transport model considered various changes in extraction wells going on and off as part of Phase I optimization and a lowering of the flow rates during Phase II optimization. Figure 6-3 (top pane) shows the measured versus model predicted influent perchlorate concentrations for the four extraction wells comprising the system. In general measured influent concentrations were slightly higher at D1-EW-1, D1-EW-501 and D1-EW-502, while slightly over-predicting at D1-EW-503.

In general, the simulated and measured mass removal and influent curves for the FPR system (Figures 6-2 and 6-3 – top panes) generally indicate that the perchlorate mass in the model is properly distributed throughout the 3-dimensional (3D) plume shell and that the flow and transport model is appropriate for continued model predictions for this system.

6.3 Perchlorate Mass Removal and Influent Concentrations – Pew Road System

During this reporting period (1 September 2010 through 31 August 2011), 4.07 pounds of perchlorate were removed from the aquifer at the Pew Road system. This is in comparison to compared to 3.84 pounds simulated by the model. For the entire model simulation (two years), the model predicted 9.88 pounds compared to 8.76 pounds measured. Cumulative perchlorate mass removed since RRA startup through 31 August 2011 is approximately 32.5 pounds. Figure 6-5 (top pane) shows the measured and simulated perchlorate mass beginning September 2009. The figure shows for the current reporting period that the slopes of the measured and simulated mass removal lines are nearly parallel. Figure 6-6 (top pane) shows the measured versus model predicted influent perchlorate concentrations for the Pew Road system. In general, during this reporting period the model fairly accurately predicted influent concentrations. However, toward the end of the reporting period, the model under-predicted perchlorate concentrations.

Measured influent concentrations at the Pew Road system is difficult to predict due to the lack of wells west of extraction well D1-EW-503. Due to environmentally sensitive habitat between D1-EW-503 and Pew Road, no monitoring wells exist between these two extraction wells. As such, data points normally used to assist in building the model plume shell can only be estimated. As indicated in Section 6.1, the shape of the observed versus model-predicted perchlorate plume in proximity to Pew Road is fairly accurately depicted (Figure 6-1).

6.4 Observed Versus Model Simulated RDX Distribution

This section presents a depiction of the RDX plume through 31 August 2011 compared to the model simulated distribution. As indicated, RDX data was used to develop the MT3D transport simulation included data collected through 31 August 2009 and predicts the distribution of the plume through 31 August 2011. The observed plume distribution includes RDX data through 31 August 2011. Figure 6-4 (top pane) depicts the observed RDX plume, and Figure 6-4 (bottom pane) depicts the model-predicted RDX plume distribution. Both the observed RDX and model simulated plumes are fairly representative of one another.

A principal difference is that the observed plume extends into the source area (MW-19/MW-73), whereas, the model did not simulate a continuing source release. Although the model shows a narrowing plume downgradient of D1-EW-501, the observed plume shows segmentation as defined by a lack of RDX concentrations above 0.6 µg/L at well cluster MW-114 and MW-129. The observed and model predicted RDX plume is similarly represented at Pew Road, except the model predicted plume extends further upgradient towards extraction well D1-EW-503.

In the area of the base boundary extraction well (D1-EW-3) RDX has been detected. Similarly, an off-base plumelet has been detected west of Route 28. Upon completion of the leading edge investigation, which is currently focusing on the off-base distribution of the plumes, a new plume shell incorporating the area west of MW-532 and including the off-base portion will be included in a plume shell update.

6.5 RDX Mass Removal and Influent Concentrations – Frank Perkins Road System

During this reporting period, 2.25 pounds of RDX were removed from the aquifer at the Frank Perkins Road system. This is in comparison to 3.07 pounds simulated by the model. For the entire simulation (two years) period, the model predicted 6.87 pounds for RDX removed compared to 5.21 pounds measured. Cumulative RDX mass removed since RRA startup through 31 August 2011 is approximately 42 pounds. Figure 6-2 (bottom pane) shows the measured and simulated RDX mass beginning September 2009. As noted by the slopes in the measured and model predicted lines, the flow/transport model considered various changes in extraction wells going on and off as part of Phase I optimization and a lowering of the flow rates during Phase II optimization. Figure 6-3 (bottom pane) shows the measured versus model predicted influent RDX concentrations for the four extraction wells comprising the system. In general measured influent concentrations were slightly higher at D1-EW-1 and D1-EW-502 than predicted by the model, whereas, the model over-predicted the influent concentration at D1-EW-501. The model fairly accurately predicted influent concentrations at D1-EW-503.

In general, the simulated and measured RDX mass removal and influent curves for the FPR system (Figures 6-2 and 6-3 – bottom panes) generally indicate that the RDX mass in the model is properly distributed throughout the 3-dimensional (3D) plume shell and that the flow and transport model is appropriate for continued model predictions for this system.

6.6 RDX Mass Removal and Influent Concentrations – Pew Road System

During this reporting period both the model and measured RDX mass removal were 0.56 pounds. For the entire model simulation (two years), the model predicted 1.43 pounds compared to 1.21 pounds measured. Cumulative RDX mass removed since RRA startup through 31 August 2011 is approximately 3.5 pounds. Figure 6-5 (bottom pane) shows the measured and simulated RDX mass beginning September 2009.

In general, the simulated and measured RDX mass removal and influent curves for the Pew Road system (Figures 6-5 and 6-6 – bottom panes) generally indicate that the RDX mass in the model is properly distributed throughout the 3-dimensional (3D) plume shell and that the flow and transport model is appropriate for continued model predictions for this system.

6.7 Base Boundary Model Predictions

Figures 6-1 and 6-4 both show a mapped perchlorate and RDX plume west of Pew Road with both a perchlorate and RDX plume extending off-base. The model predicted (bottom panes) of both figures do not reflect these plumes as depicted in the observed (top) panes. The 3-D perchlorate and RDX plume shells incorporated into the MT3D transport simulations were developed with data through August 2009, and the principal discovery of the plumes were not identified until profile samples were obtained from MW-532 in January 2010, Section 5.3.

The Base Boundary extraction well D1-EW-3 went on-line on 22 June 2011. Influent perchlorate concentrations upon system startup were 5.7 µg/L and perchlorate concentrations decreased a month later to approximately 3 µg/L. By mid-August perchlorate influent concentrations measured approximately 2.5 µg/L. Less than 0.1 pounds of perchlorate was removed from the extraction well by August 2011. Influent RDX concentrations started off at 0.46 µg/L and after one month dropped to approximately 0.25 µg/L and have remained in that concentration range since. Less than 0.01 pounds of RDX has been removed from the extraction well as of the end of the reporting period.

Upon completion of the off-base leading edge investigation, which is on-going, a new perchlorate and RDX plume shell may be developed so that 1) measured versus model predicted influent and mass removal calculations for the Base Boundary extraction well can be determined, 2) future predictions regarding off-base migration of the plumes can be determined.

7.0 OPTIMIZATION ANALYSIS

7.1 Frank Perkins Road system – Phase 2 Optimization

The design flow rates used since start up of the FPR system in June 2007 were determined in 2005 based on capture of the perchlorate plume to the 1 µg/L contour level. Since that time, the remediation goal has changed to 2 µg/L and the plume has gotten significantly narrower due to the withdrawal and treatment of over a billion gallons of water by the system. As reported in this ESPM report, the influent concentrations of both perchlorate and RDX at the FPR plant have dropped since start up, which further indicates that "cleaner" water is being drawn into the system as the plume shrinks.

Groundwater simulations using the flow model show that the design pumping rates for the extraction wells in the FPR system generate capture zones that extend significantly beyond the edges of the plume. This means that clean water is being captured as well as the contaminated plume. The intent of the Phase 1 optimization of the FPR system, which began in September 2009, was to move contaminants out of the area of the stagnation zones and move them downgradient to the next extraction well. Phase 1 was intended to end in September 2010 but continued to run until 15 February 2011 before Phase 2 optimization was implemented.

A PN titled "Phase 2 Optimization Implementation" for the FPR system was submitted to the regulatory agencies and is included in Appendix F. The Phase 2 optimizations discontinued the cyclic pumping at extraction wells D1-EW-1, D1-EW-501, and D1-EW-502, and pump all four extraction wells, including D1-EW-503, at a reduced combined rate of 500 gpm.

Using the reduced extraction flow rate of 500 gpm, the transport model predicts that the time needed to reach the remedial goal for perchlorate within the FPR capture zone would be approximately 1 year longer than it would be at the design flow rate (2015 instead of 2014). However, the Pew Road system and the Base Boundary extraction systems would likely still be in operation for several additional years so the overall time to completely remediate the plume would be unchanged by the proposed optimization (i.e., the proposed Phase 2 optimization will not result in the extension of remedial operations for the Demo 1 plume beyond original estimates).

The table below summarizes the flow rates (in gpm) under design and the flow rates implemented under Phase 2 optimization:

	Total	EW-501	EW-502	EW-1	EW-503
Original Design	808	191	251	161	205
Phase 2	500	150	100	150	100

Perchlorate concentrations in extraction well D1-EW-503, located approximately 1200 feet downgradient (west) of Frank Perkins Road, have fluctuated within a narrow concentration range (i.e., 0.368 ug/L to 0.479 ug/L) over the last two years. Perchlorate concentrations in

MW-210M2, located approximately 600 feet upgradient or two years travel time from D1-EW-503, have also fluctuated within a narrow concentration range (i.e., 1.39 ug/L to 3.98 ug/L) between December 2007 and April 2011 (Figure 7-1). Current RDX concentrations measured in MW-210M2 and D1-EW-503 are presently non-detect during this reporting period. As concentrations in MW-210 fall below 2 µg/L consideration should be given to shutting off D1-EW-503.

7.2 Base Boundary system – Optimization

The Base Boundary extraction well, D1-EW-3, commenced operation on 22 June 2011 and the extraction rate was approximately 50 gpm until 7 July 2011 (day 16 following system startup) when the extraction rate was reduced to 30 gpm. Concentrations of perchlorate in MW-544M1 and MW-258M1 measured in July/August 2011 indicated that the plume was wider than the system basis of design. Figure 4-5 indicates that at 55 gpm, measurement for 7 July 2011, water levels based on the perchlorate conceptual understanding would be captured. However, under a wider plume to the south, currently depicted in Figure 4-5, a higher flow rate would be required to capture the southern edge of the plume. Model-simulated capture zones at 30, 50 and 65 gpm are depicted in Figure 7-2. The treatment system is currently designed to handle a flow of 50 gpm, however the upper limit of the GAC vessels are 65 gpm. The bottom pane depicts capture of the plume at wells MW-258M1 and potential capture at MW-544M1 at this flow rate based on model results. It is recommended that the extraction well be pumped at the treatment system's maximum capacity of 65 gpm and the capture zone be re-evaluated using synoptic water level data collected under the increased pumping rate.

8.0 RECOMMENDATIONS FOR CHANGES IN MONITORING AND OPERATIONS

In Sections 8.2 through 8.4, recommendations are presented to decrease the extraction rates of the FPR system and subsequently reduce the number of wells sampled as part of the chemical and hydraulic monitoring programs. Rationale for the changes has been provided in previous report sections and is briefly summarized below:

8.1 Treatment System Operational Recommendations

The Demo 1 ETR system for Frank Perkins Road, Pew Road and the Base Boundary has operated as anticipated based on review of in-plant analytical results. As a result, no changes are recommended to the current system operations.

8.2 Extraction Well Recommendations

Phase 2 optimization activities for the FPR system was implemented on 15 February 2011, and the flow rate was reduced to 500 gpm (D1-EW-1: 150 gpm; D1-EW-501: 150 gpm; D1-EW-502: 100 gpm; and D1-EW-503: 100 gpm). These reduced pumping rates should be maintained through the next reporting period.

Influent concentrations at D1-EW-503 and monitoring well MW-210M2 (Section 7.1) continue to decline and measured 0.4 µg/L (August 2011) and 2.81 µg/L (April 2011), respectively, see Figure 7-1. If these decreasing concentration trends continue, extraction well D1-EW-503 should be considered for shut-down.

The Base Boundary extraction well D1-EW-3, was extracting groundwater at 30 gpm at the end of this reporting period. As discussed in Section 7.2 and shown on Figure 4-5 (bottom pane), measured water levels indicate that the extraction well should be increased to the system's maximum capacity of approximately 65 gpm. This flow rate should be maintained until the southern edge of the perchlorate plume collapses inward toward the extraction well and measured perchlorate concentrations in MW-258M1 and MW-544M1 are consistently below 2 µg/L.

8.3 Hydraulic Monitoring Network Recommendations

The hydraulic monitoring well network for the Frank Perkins Road system and Pew Road system have had semi-annual gauging since the start-up of the RA system in June 2007. It has been proven that although regional water levels have intermittently increased and decreased that hydraulic capture is maintained. It is recommended that the hydraulic monitoring well network part of the Frank Perkins Road and Pew Road system be reduced to annual water level measurements from semi-annual measurements and that water levels be recorded in April of each year, concurrent with maximum number of wells sampled under the chemical monitoring plan. If further flow rate optimization of the FPR/Pew Road systems is recommended, a project note will be developed to include appropriate monitoring to ensure that hydraulic capture for these system(s) is maintained. Those wells for which water levels will be reduced to annual monitoring are depicted in Figure 8-1.

However, it is recommended that monitoring wells located west of Pew Road be included in the Base Boundary extraction well monitoring network and that these wells be measured semi-annually. The wells included in the hydraulic monitoring network for the Base Boundary extraction system are depicted in Figure 8-1 and Table 8-1.

8.4 Chemical Monitoring Network Recommendations

This section presents recommendations for changes to the chemical monitoring program and includes off-base, newly installed wells. Table 8-2 includes the proposed chemical monitoring schedule. The data referenced below is presented in Appendix D. Additionally, it is recommended that since TAL metals continue not to exceed MCP GW-1 standards that annual metals sampling at wells MW-19S and MW-73S be discontinued.

Zone 1

MW-114M1: Both perchlorate and RDX are sampled semi-annually, however as mass is being removed by the extraction systems concentrations are dropping in this well. Perchlorate concentrations continue to decrease and measured 0.40 µg/L in April 2011 down from 2.16 µg/L in November 2009. Similarly, RDX has decreased from 1.3 µg/L in November 2009 to non-detect in April 2011 with a clearly defining downward trend. It is recommended that the sample frequency be decreased from semi-annual to annual for both perchlorate and explosives.

MW-114M2: Both perchlorate and RDX are sampled semi-annually, however as mass is being removed by the extraction systems concentrations are dropping in this well. Perchlorate concentrations continue to decrease and measured 0.7 µg/L in April 2011 down from 1.6 µg/L in November 2009. Similarly, RDX has decreased from 1.3 µg/L in April 2009 to non-detect in April 2011 with the last three rounds being ND. It is recommended that the sample frequency be decreased from semi-annual to annual for both perchlorate and explosives.

MW-129M2: Both perchlorate and RDX are sampled semi-annually, however as mass is being removed by the extraction systems concentrations are dropping in this well. Perchlorate concentrations continue to decrease and measured <0.1 µg/L in May 2011 down from approximately 2 µg/L in April 2009. Similarly, RDX has decreased from 0.583 µg/L in April 2009 to non-detect in the four consecutive sampling rounds. It is recommended that the sample frequency be decreased from semi-annual to annual for both perchlorate and explosives.

MW-165M2: Both perchlorate and RDX are sampled semi-annually, however as mass is being removed by the extraction systems concentrations are dropping in this well. Perchlorate concentrations continue to decrease and measured 0.233 µg/L in April 2011 down from 1.09 µg/L in November 2009. Similarly, RDX has decreased from 11.6 µg/L in April 2008 to non-detect in the six consecutive sampling rounds. It is recommended that the sample frequency be decreased from semi-annual to annual for both perchlorate and explosives.

MW-76M2: Perchlorate concentrations at this well is sampled semi-annual however, perchlorate concentrations have remained fairly constant ranging from 1.4 µg/L in November to 2009 to 0.921 µg/L in April 2011. Based on this trend and its proximity to an extraction well

concentrations should continue to decrease. It is recommended that the sample frequency be decreased from semi-annual to annual for perchlorate.

MW-77M2: Perchlorate concentrations at this well is sampled semi-annual however, perchlorate concentrations have decreased from 1.89 µg/L in November to 2009 to 0.321 µg/L in April 2011. Based on this decreasing trend and its proximity to an extraction well, concentrations should continue to decrease. It is recommended that the sample frequency be decreased from semi-annual to annual for perchlorate

Zone 2

MW-211M2: Both perchlorate and RDX are sampled semi-annually, however as mass is being removed by the Pew Road extraction system concentrations have remained very low. Since April 2005 when perchlorate measured 3 µg/L concentrations have been either non-detect or <0.1 µg/L. Similarly, since April 2005 when RDX was detected at 0.38 µg/L this well has been non-detect in 13 consecutive sample rounds. It is recommended that the sample frequency be decreased from semi-annual to annual for both perchlorate and explosives.

Zone 3

MW-225M2: Both perchlorate and RDX are sampled three times annually, however as mass is being removed by the Pew Road extraction system clean water is filling in behind this well. With the exception of one sample which detected perchlorate at <0.01 µg/L in April 2010 this well has been non-detect since August 2002. Similarly, RDX has been non-detect in all samples collected since August 2002. It is recommended that the sample frequency be decreased from three times per year to annual sampling for both perchlorate and explosives.

MW-225M3: Both perchlorate and RDX are sampled three times annually, however as mass is being removed by the Pew Road extraction system clean water is filling in behind this well. Perchlorate concentrations decreased from 20.7 µg/L in April 2007 to non-detect by September 2008. This well has been either non-detect or <0.2 µg/L in the last 10 sampling rounds. Similarly, RDX has been non-detect in the 11 samples collected since December 2007. It is recommended that the sample frequency be decreased from three times per year to annual sampling for both perchlorate and explosives.

MW-258M1: This well has shown a rising perchlorate trend since November 2009 increasing from 0.611 µg/L to 3.29 µg/L and is sampled 3 times per year for perchlorate. Explosives have not been analyzed for since September 2003. It is recommended that perchlorate sampling be reduced to semi-annual and that annual explosive analysis be added at this well .

MW-258M2: Both perchlorate and RDX are sampled three times annually in this well. Perchlorate concentrations have decreased from 4 µg/L in June 2005 to non-detect by August 2006. Since then concentrations have not exceeded 0.20 µg/L (December 2010) and currently measured 0.117 µg/L (August 2011). RDX has never been detected in this well (over 20 sampling events). It is recommended that the sample frequency be decreased from three times per year to annual sampling for both perchlorate and explosives.

MW-258M3: Both perchlorate and RDX are sampled three times annually in this well. Perchlorate concentrations have decreased from 1.9 µg/L in June 2005 to non-detect by April 2006 and has not exceeded 0.1 µg/L since. Similarly, RDX has never been detected in this well. It is recommended that the sample frequency be decreased from three times per year to annual sampling for both perchlorate and explosives.

Wells Currently Not in the Chemical Monitoring Program

The following newly installed wells have not been formally incorporated in the chemical monitoring program as they were installed during this reporting period. Proposed sample frequencies are recommended as follows:

MW-543M1/M2: These wells were each sampled twice since December 2010 and the maximum perchlorate concentration was 0.15 J µg/L (M2 screen). RDX has been non-detect in each sample. This well is outside the current depiction of the perchlorate plume to the south. It is recommended that perchlorate and explosives be analyzed on a semi-annual basis at these wells.

MW-544M1: This well has been sampled three times since December 2010 and concentrations of perchlorate increased from 0.78 µg/L (December 2010) to 5.8 µg/L (June 2011) and has remained above 4 µg/L since. This well is within the current depiction of the perchlorate plume (along the base boundary). It is recommended that perchlorate and explosives be analyzed in this well on a semi-annual basis.

MW-544M2/M3: These wells were each sampled twice since December 2010 and concentrations of perchlorate have not exceeded 0.3 µg/L (M2 screen) and concentrations have declined slightly in these wells. Similarly, RDX has been non-detect in all three samples. It is recommended that perchlorate and explosives be analyzed on a semi-annual basis from these wells.

MW-545M1/M2/M3/M4: These wells were each sampled twice since December 2010 and the maximum detected perchlorate concentration in the well cluster was 12.2 µg/L (M2 screen). The maximum RDX concentration was detected in December 2010 in the M2 screen at 1.08 µg/L. Samples collected from, the M1 and M4 screens were 0.37 µg/L and non-detect, respectively. Since this well is adjacent to the extraction well D1-EW-3, it is recommended that these wells be sampled on a semi-annual basis. .

MW-546M1/M2: These wells were each sampled twice since December 2010 and concentrations have not exceeded 0.3 µg/L (M1 screen) for perchlorate. Similarly, RDX has been non-detect in both samples. It is recommended that perchlorate and explosives be analyzed on a semi-annual basis from these wells.

MW-554M1/M2: These off-base wells were each sampled twice for perchlorate (in May and June 2011). The maximum detected perchlorate concentration (June 2011) was 5.38 µg/L (M1 screen) with both the M1/M2 screens containing perchlorate above 2 µg/L in the June 2011 sample. RDX was detected in the deeper well at a maximum concentration of 0.32 µg/L with

the shallower (M2 well) being non-detect. It is recommended that perchlorate and explosives be analyzed on a semi-annual basis from these wells.

MW-556M1/M2: These off-base wells were installed post reporting period and will be evaluated during the next reporting period. As such, these wells will be sampled for perchlorate and explosives three times for the first year.

MW-558M1/M2: These off-base wells were installed post reporting period and will be evaluated during the next reporting period. As such, these wells will be sampled for perchlorate and explosives three times for the first year.

MW-559M1/M2: These off-base wells were installed post reporting period and will be evaluated during the next reporting period. As such, these wells will be sampled for perchlorate and explosives three times for the first year.

8.5 Further Characterization Efforts

Off-base characterization is continuing to define the leading edge of the perchlorate plume. Monitoring wells have subsequently been installed in off-base borings DP-556, DP-558, and MW-559 (MW-556M1/M2, MW-558M1/M2 and MW-559M1/M2) and water levels are proposed for collection semi-annually from these wells (Figure 8-1 and Table 8-1). Borings are presently being proposed for installation along County Road in Bourne, MA in order to define the leading edge of the perchlorate contamination. Chemical results for these samples, which occurred post reporting period can be found in the sites chemical database.

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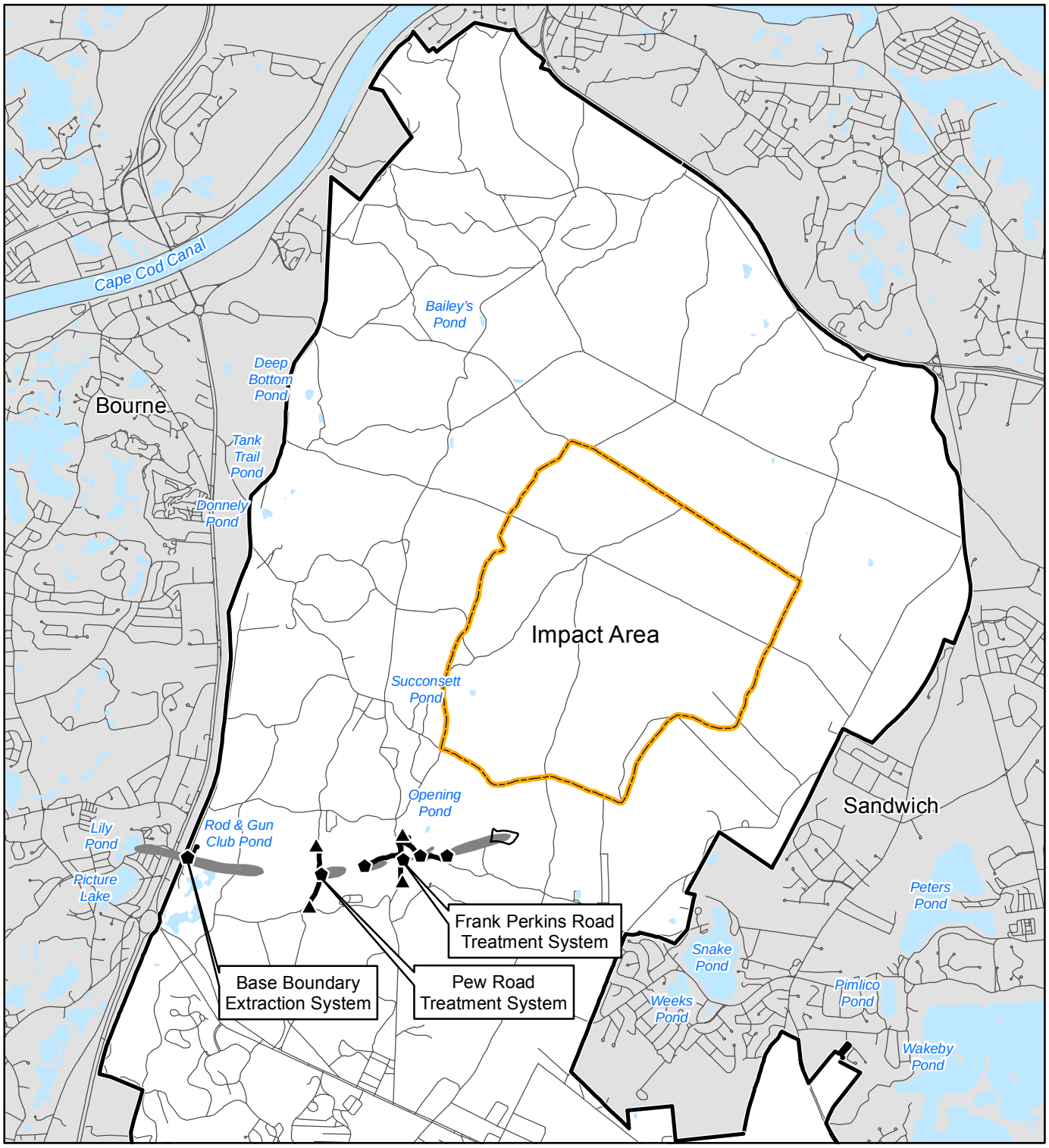
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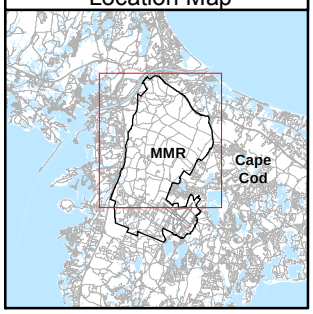
FIGURES



Legend

- MMR Boundary
- Impact Area Boundary
- Demo 1 Source Area Boundary
- Demo 1 Composite Perchlorate (shown to 2 µg/L) and RDX (shown to (0.6 µg/L)
- Existing Extraction Well
- Existing Injection Well
- Treatment System Piping

Location Map



0 2,500 5,000 Feet

US Army Corps of Engineers
New England District

DRAFT

Location of Demolition Area 1

FIGURE 1-1

M:\MMR\2011\Demo1\2011AnnRpt\Figures\Fig1-1_020612.pdf
M:\MMR\2011\Demo1\2011AnnRpt\MXDs\Fig1-1_020112.mxd
February 6, 2012 DWN: MTW CHKD: MRK

Impact Area Groundwater Study Program

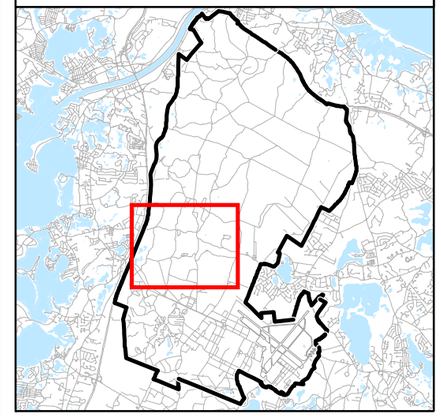
Impact Area Groundwater Study Program

LEGEND

- Monitoring Well
- Extraction Well
- Injection Well
- Perchlorate Plume > 2 ppb
- RDX Plume > 0.6 ppb
- Influent Piping
- Effluent Piping
- Elevation Contours in Feet Above NGVD

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

RA ETR Systems
2011 System Performance Monitoring Report
Demo 1 Groundwater Operable Unit

0 1,000 Feet

N

US Army Corps of Engineers
New England District

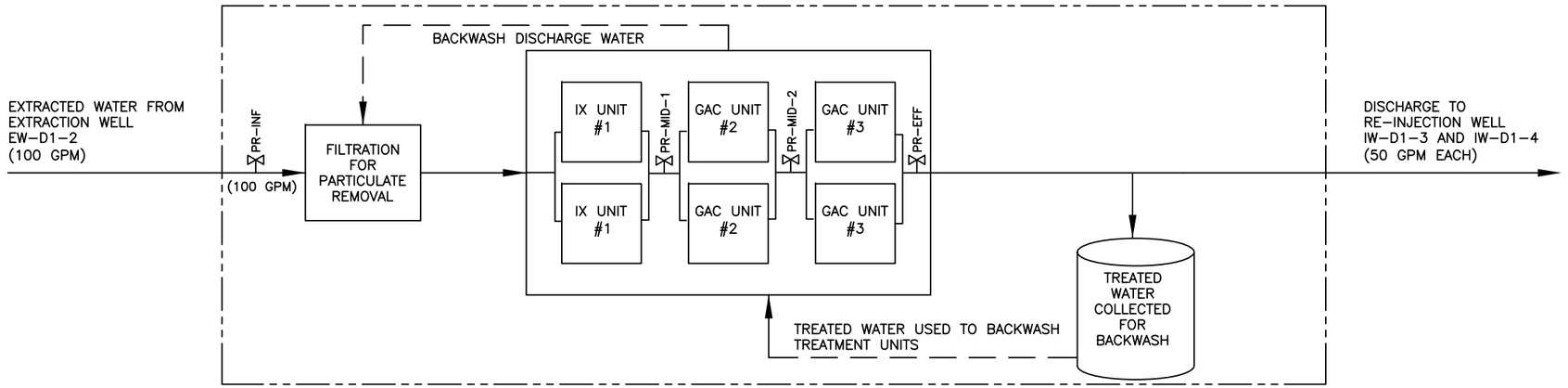
DRAFT

M:\MMR\2011\Demo1\2011AnnRpt\Figures\Fig2-1_020612.pdf
M:\MMR\2011\Demo1\2011AnnRpt\MXDs\Fig2-1_020612.mxd
February 6, 2012 DWN: MTW CHKD: MRK

FIGURE
2-1

SAMPLING LOCATIONS

SAMPLE PORT ID	DESCRIPTION	ANALYSES
PR–INF	INFLUENT SAMPLE LOCATION	PERCHLORATE AND EXPLOSIVES
PR–MID–1	PRIMARY MIDFLUENT LOCATION	PERCHLORATE (UNTIL BREAK THROUGH, THEN NONE)
PR–MID–2	SECONDARY MIDFLUENT SAMPLE LOCATION	EXPLOSIVES (PERCHLORATE FOLLOWING BREAK THROUGH IN LEAD VESSEL)
PR–EFF	EFFLUENT SAMPLE LOCATION	PERCHLORATE AND EXPLOSIVES



LEGEND:

– TREATMENT SYSTEM THROUGH FLOW

– TREATMENT SYSTEM PERIPHERAL FLOW

– SAMPLE PORT

NOTES:

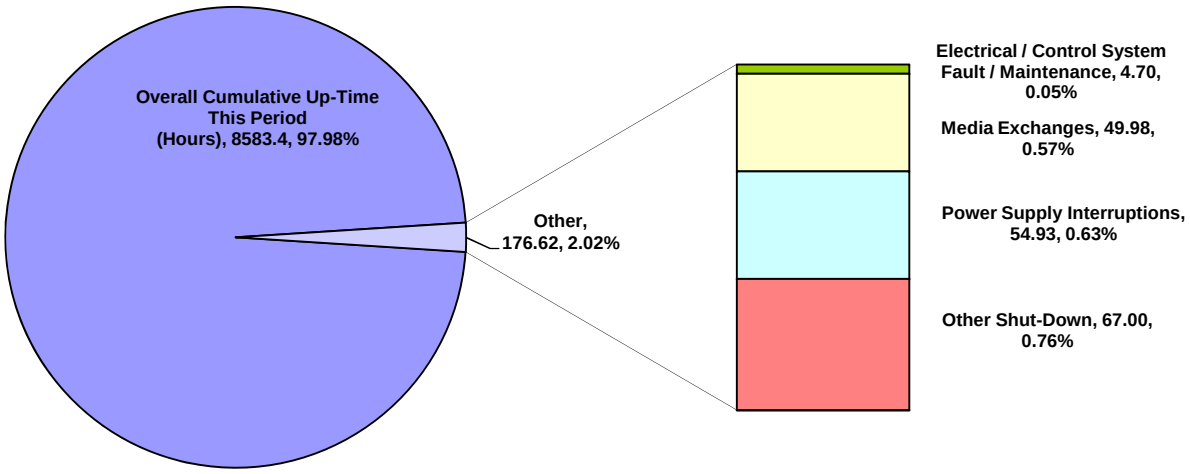
1. GAC = GRANULAR ACTIVATED CARBON MEDIA
2. ALL GAC UNITS ARE 1,000 LB. VESSELS FILLED WITH GRANULAR ACTIVATED CARBON.
3. IX = ION EXCHANGE.
4. ALL IX UNITS HAVE 29 CU. FT. OF NITRATE SELECTIVE RESIN.

PROCESS FLOW DIAGRAM
PEW ROAD RA ETR SYSTEM
1 September 2009 thru 31 August 2010
Demolition Area 1 Groundwater Operable Unit

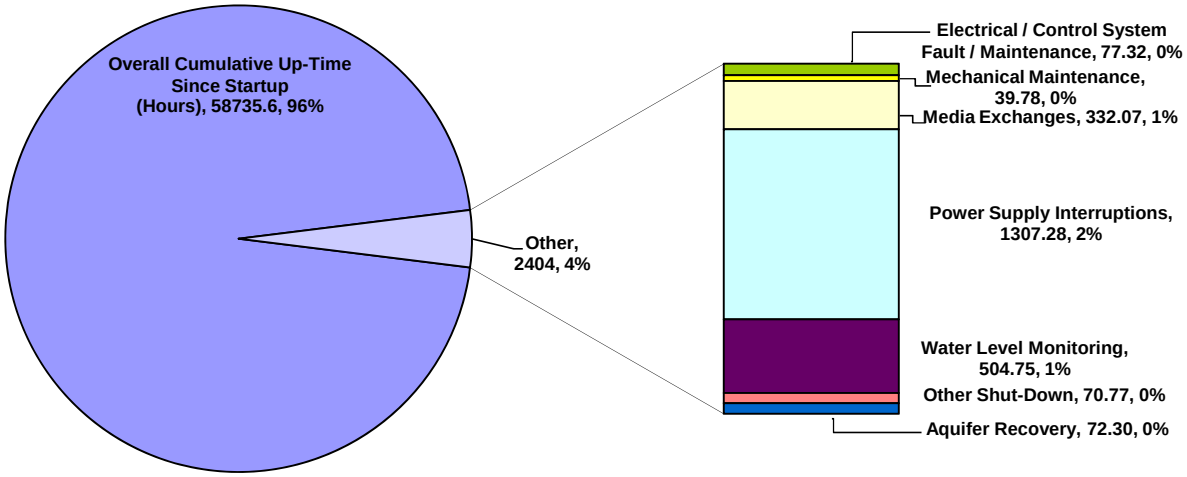
PROJECT MANAGER M. ANDERSON	DEMO 1 NUMBER MMR–9982
CHECKED BY D. WOOD	PROJECT NUMBER 2–7622–5018
DRAWN BY A. MCAVOY	FIGURE NUMBER 2–2
DATE DRAWN 09/15/08	

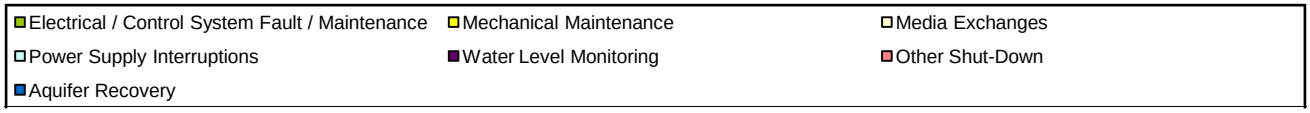
Figure 2-3
Downtime by Category
Demo 1 Area Pew Road System GW System

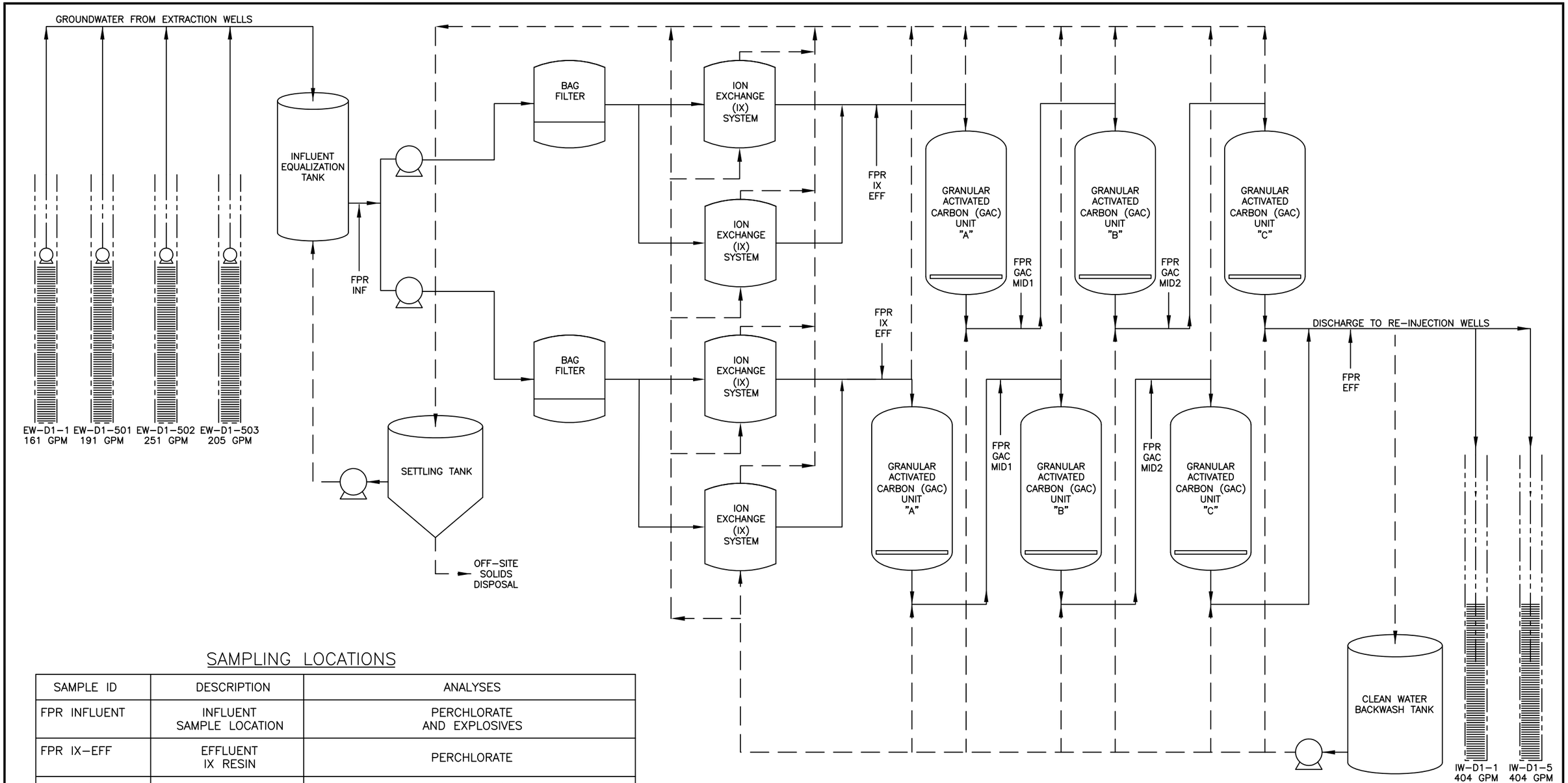
a. Downtime September 2010 through August 2011



b. Downtime Since Remedy Startup (September 2004)







SAMPLING LOCATIONS

SAMPLE ID	DESCRIPTION	ANALYSES
FPR INFLUENT	INFLUENT SAMPLE LOCATION	PERCHLORATE AND EXPLOSIVES
FPR IX–EFF	EFFLUENT IX RESIN	PERCHLORATE
FPR GAC–MID1	MIDFLUENT LEAD GAC	EXPLOSIVES (PERCHLORATE FOLLOWING BREAK THROUGH OF IX)
FPR GAC–MID2	MIDFLUENT LAG GAC	NONE TILL BREAK THROUGH OF LEAD GAC, THEN EXPLOSIVES
FPR EFF	EFFLUENT SAMPLING LOCATION	PERCHLORATE AND EXPLOSIVES

LEGEND:

NORMAL OPERATIONS

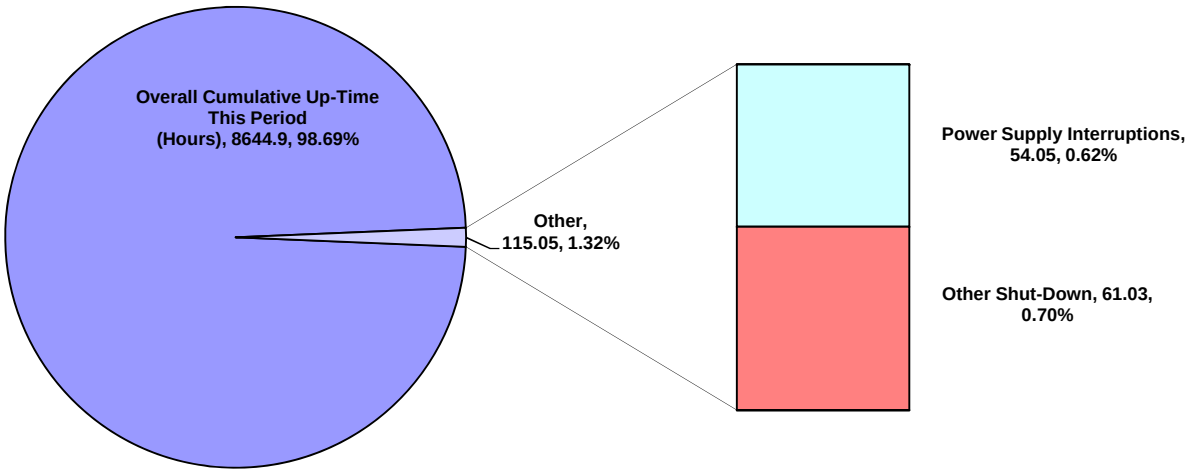
BACKWASH OPERATIONS

PROCESS FLOW DIAGRAM
FRANK PERKINS ROAD RA ETR SYSTEM
1_SEPTEMBER_2009_THRU_31_AUGUST_2010
DEMO 1 GROUNDWATER OPERABLE UNIT

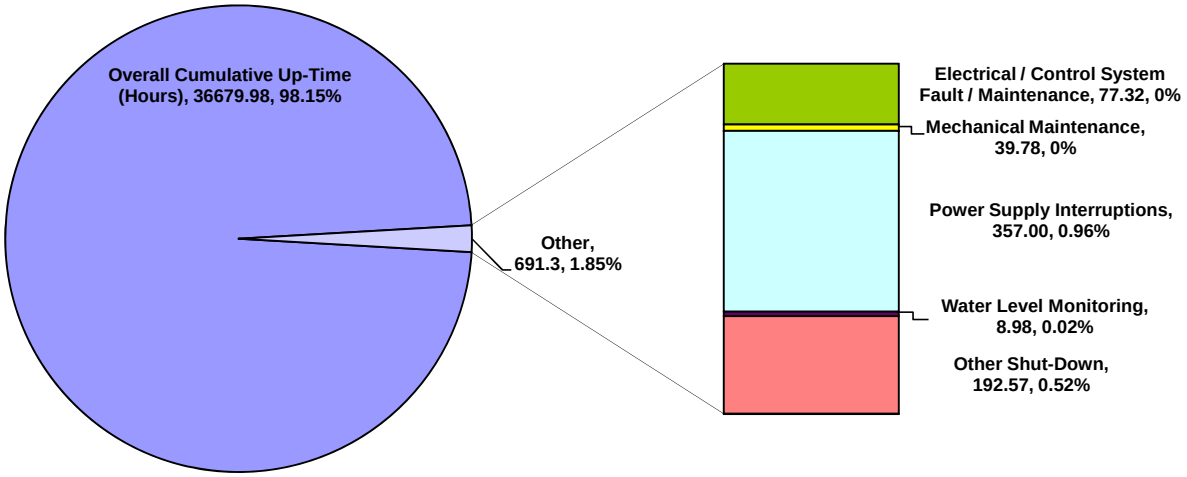
PROJECT MANAGER S. MICHALAK	DRAWING NUMBER FPR–PR–101.DWG
CHECKED BY D WOOD	PROJECT CODE FPR
DRAWN BY D HASSETT	FIGURE NUMBER 2–4
DATE DRAWN 9/29/08	

Figure 2-5
Downtime by Category
Demo 1 Area Frank Perkins Road RA System GW System

a. Downtime September 2010 through August 2011



b. Downtime Since RA Startup (June 25, 2007)



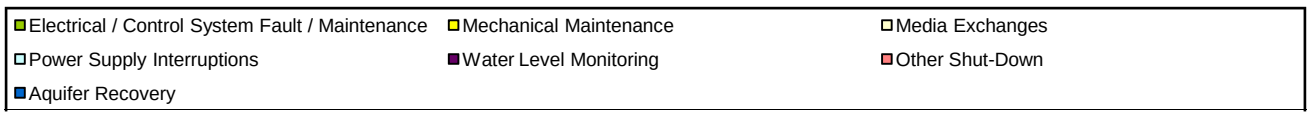


Figure 3-1
Influent Contaminant Concentrations
Demo 1 Area Pew Road GW System

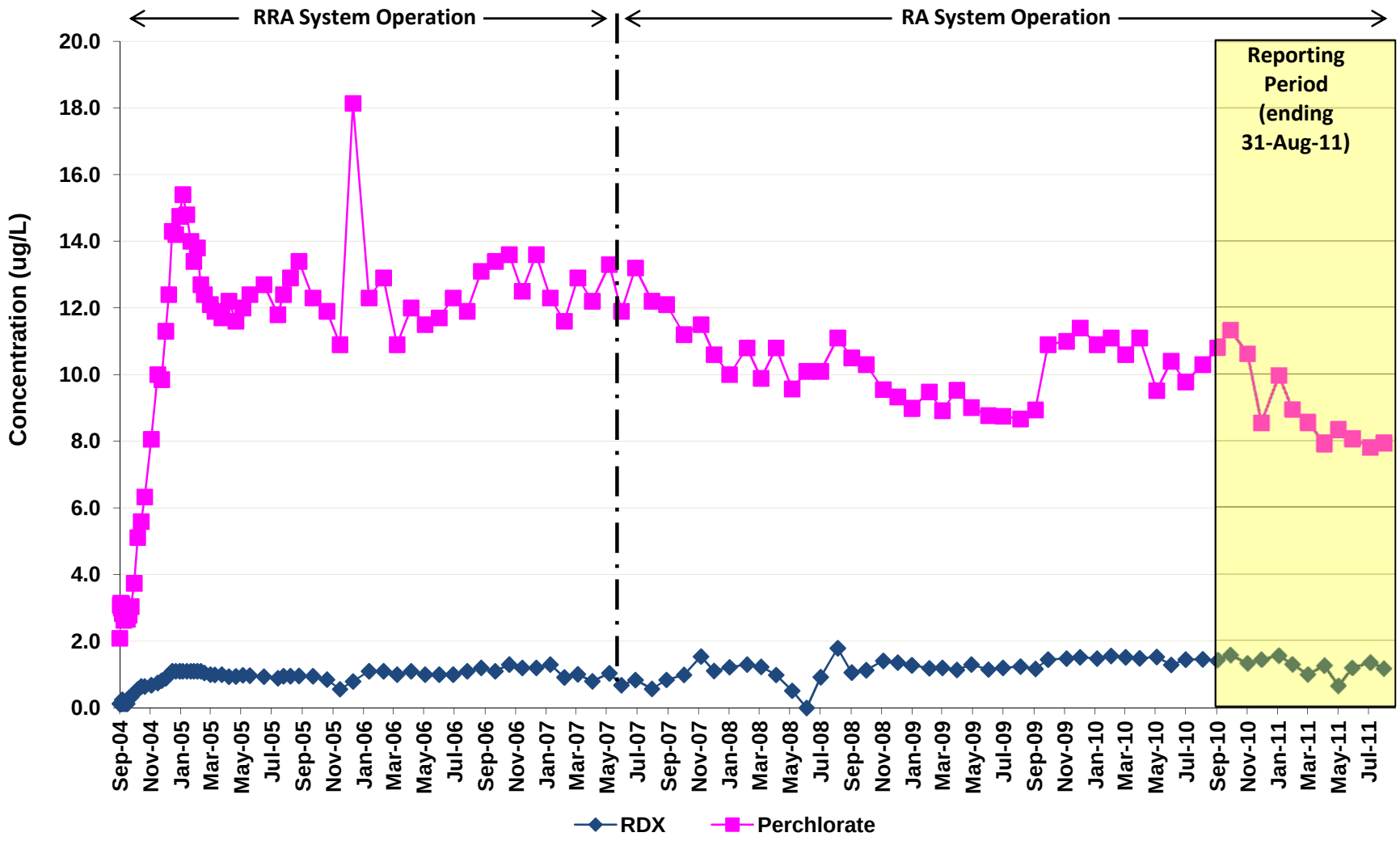


Figure 3-2
Total Groundwater Volume Treated Since Startup
Demo 1 Area Pew Road GW System

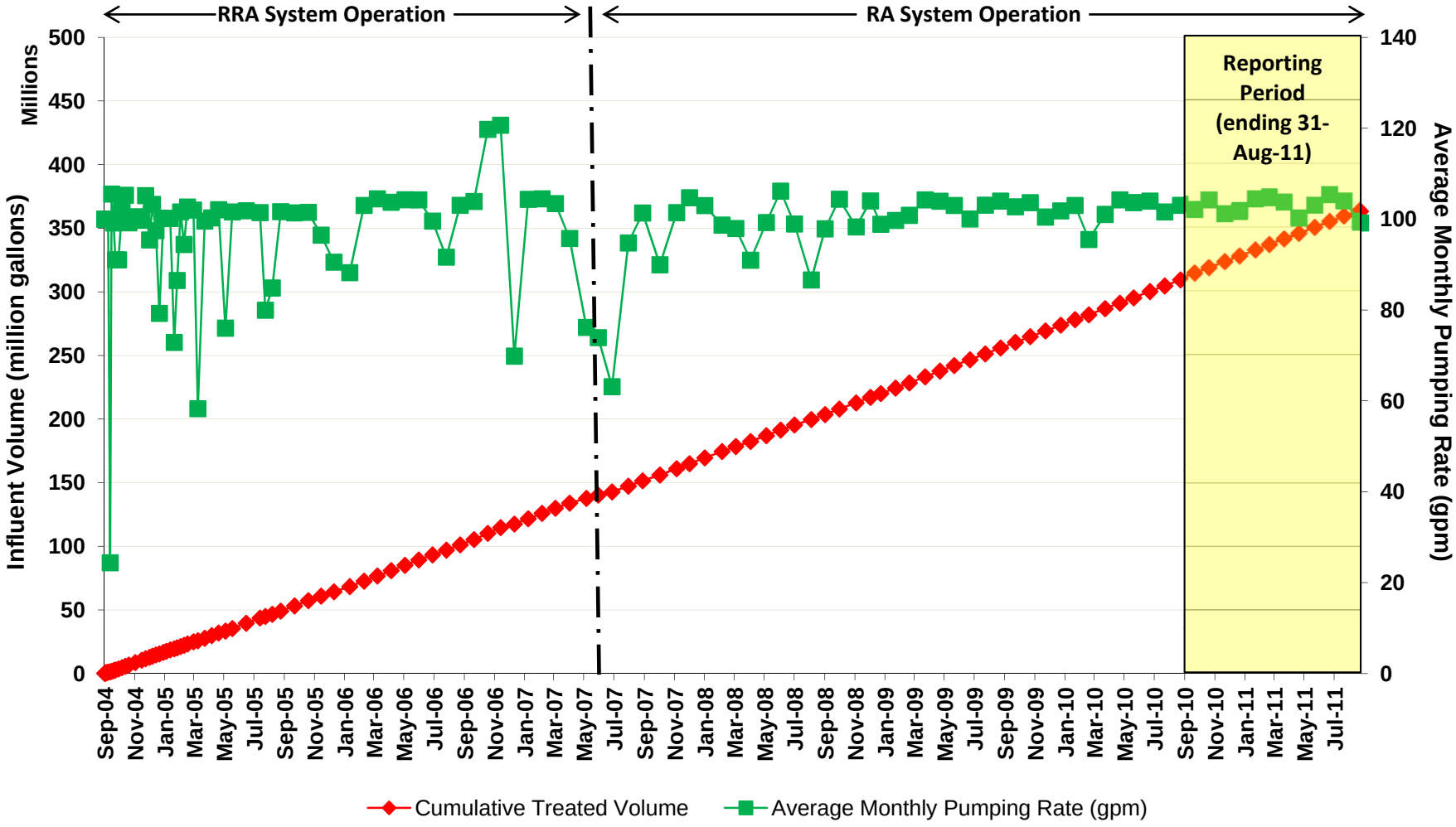


Figure 3-3
Contaminant Mass Removal Since Startup
Demo Area 1 Pew Road GW System

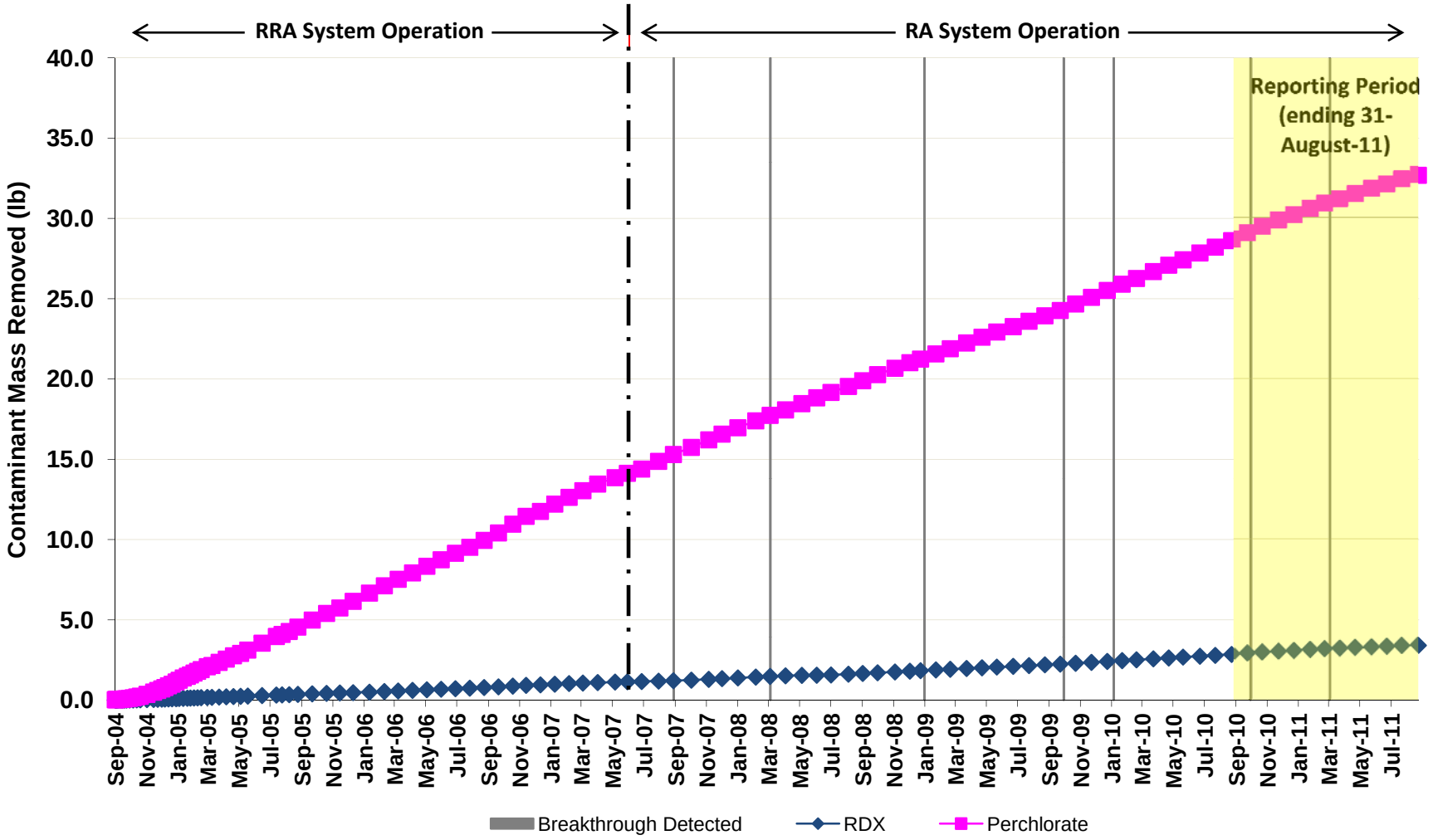


Figure 3-4
Influent Contaminant Concentrations Since Start-up
Demo 1 Area Frank Perkins Road Treatment Facility

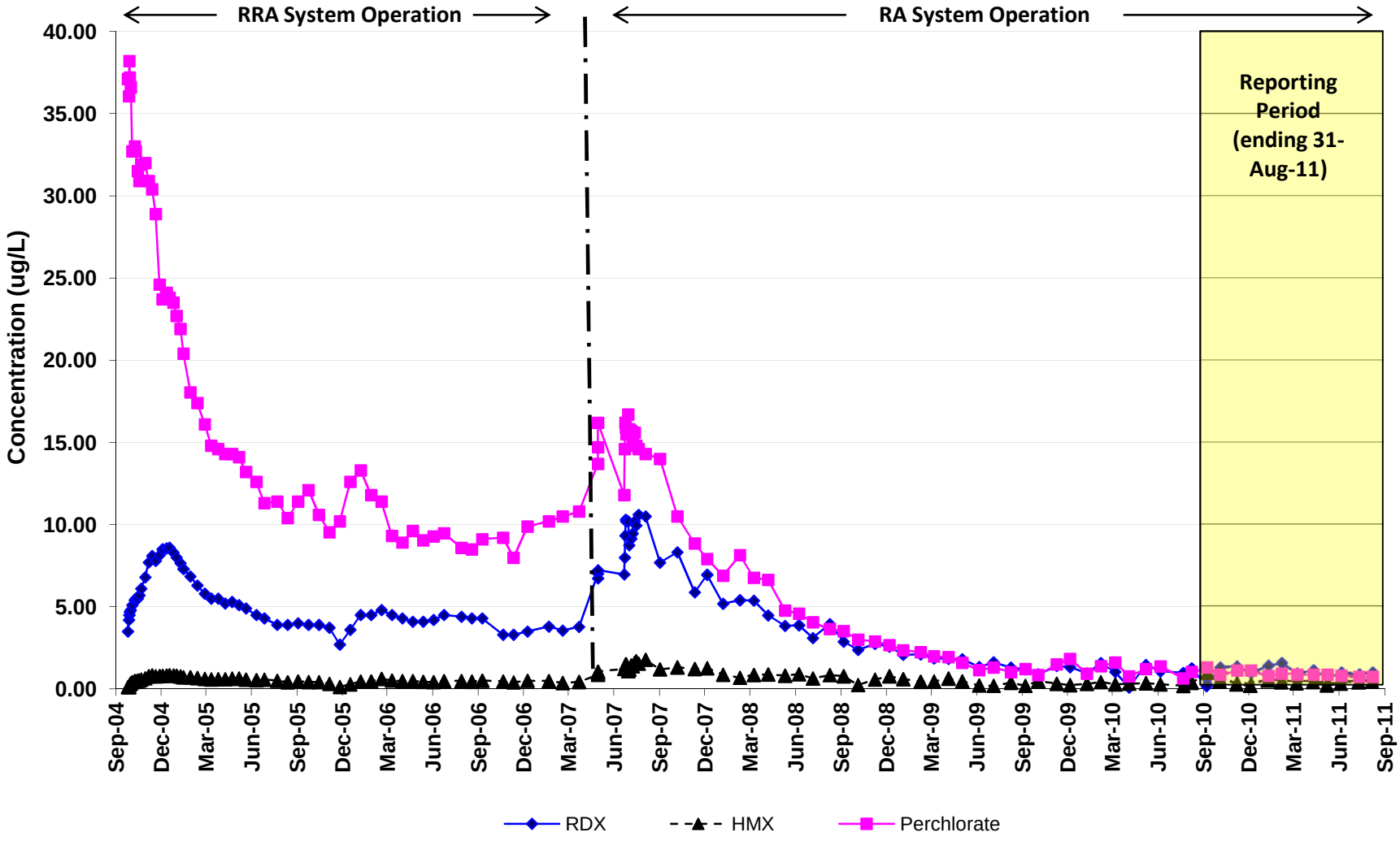


Figure 3-5
Total Groundwater Volume Treated Since Startup
Demo 1 Area Frank Perkins Road Treatment Facility

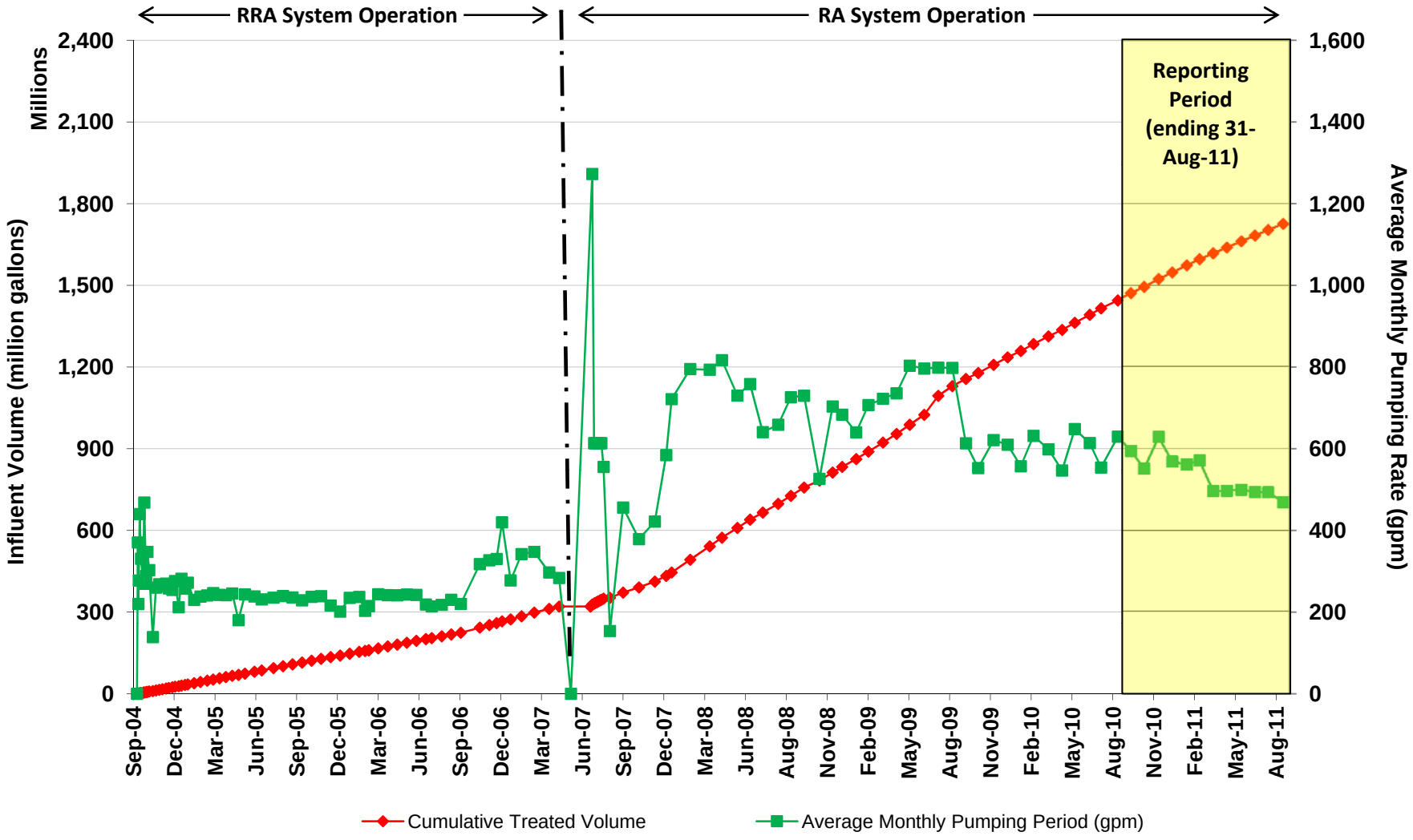


Figure 3-6
Contaminant Mass Removal Since Start-up
Demo 1 Area Frank Perkins Road Treatment Facility

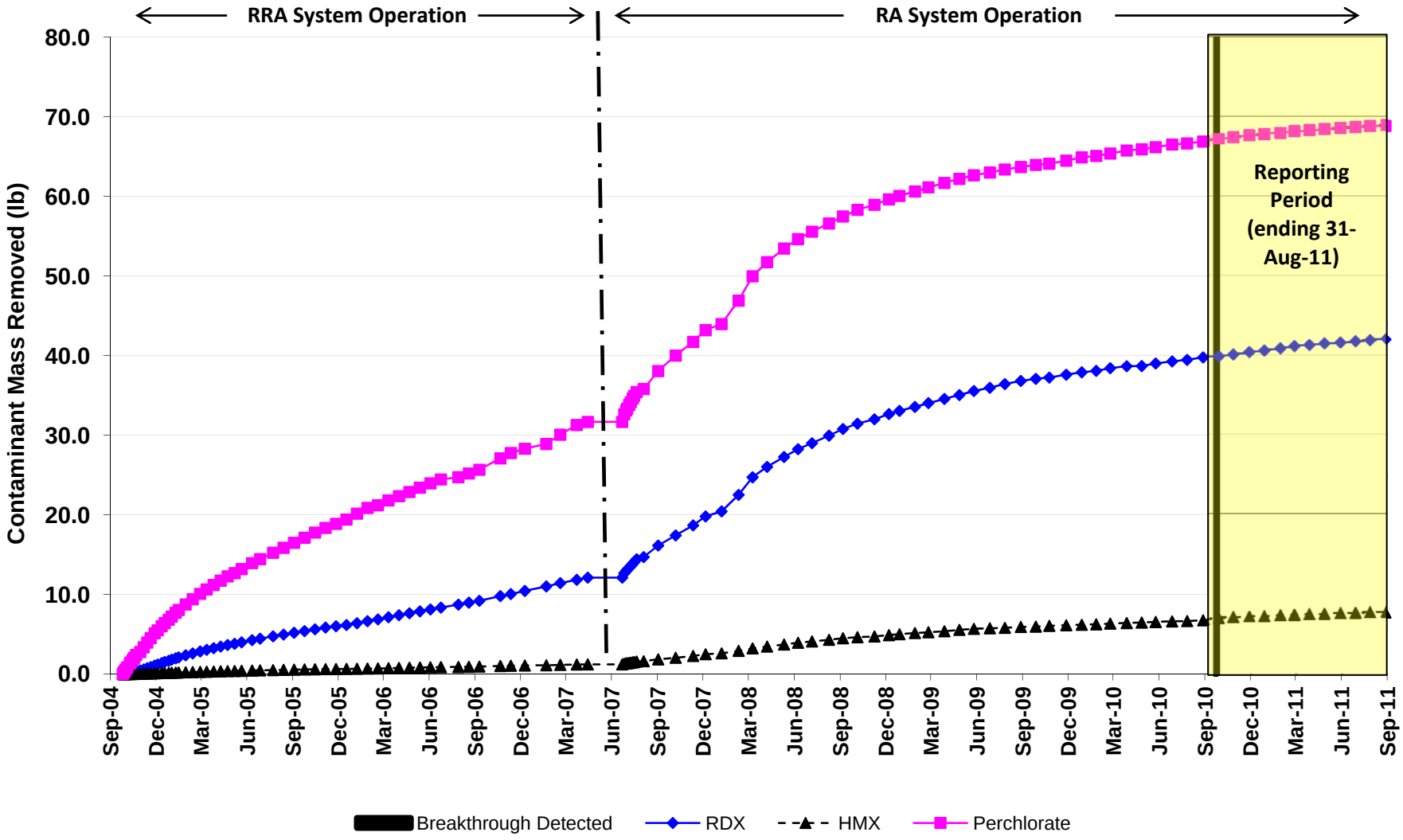


Figure 3-7
Influent Contaminant Concentrations Since Start-up
Demo 1 Area Base Boundary Treatment Facility

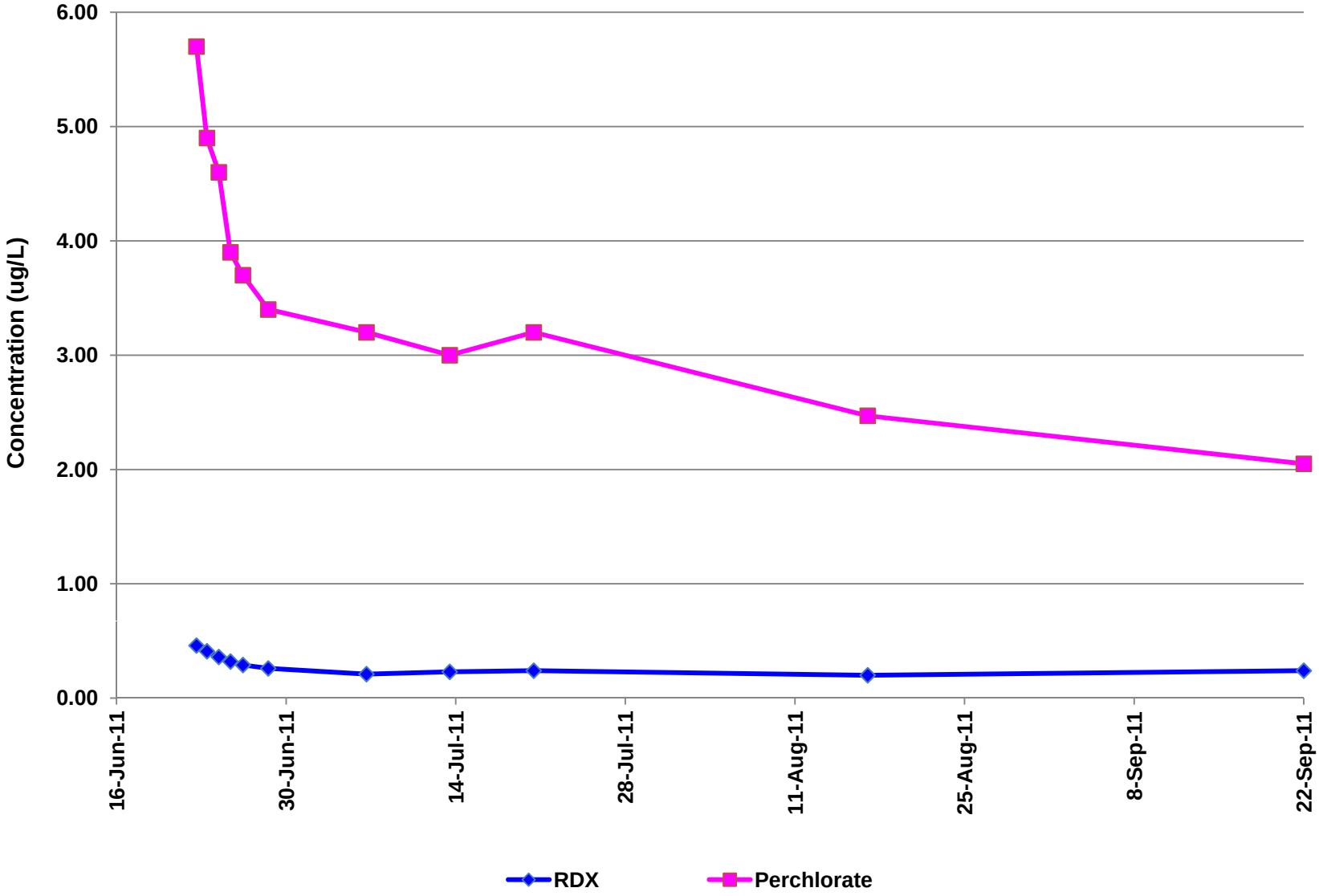


Figure 3-8
Total Groundwater Volume Treated Since Startup
Demo 1 Area Base Boundary Treatment Facility

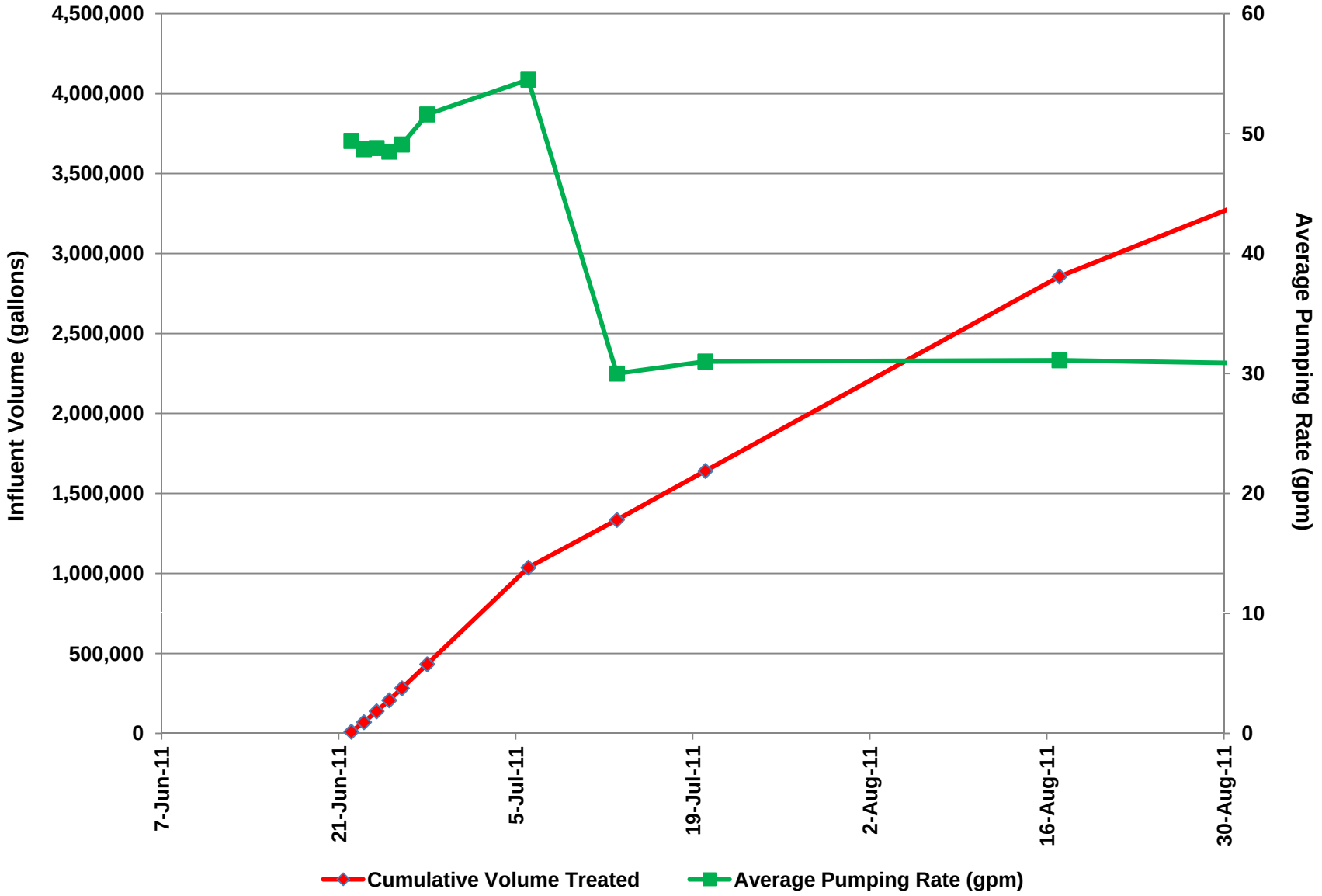
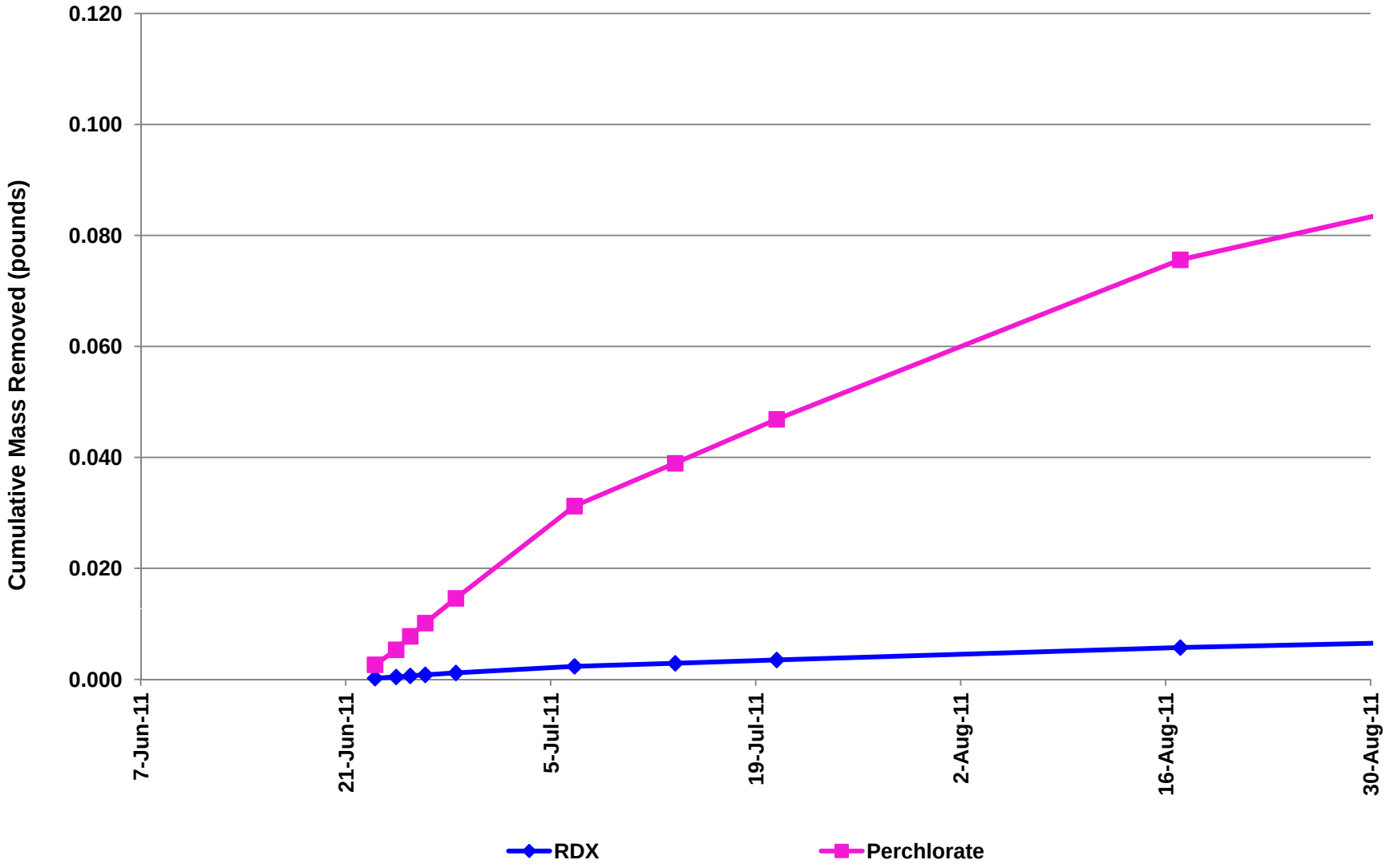


Figure 3-9
Contaminant Mass Removal Since Start-up
Demo 1 Area Base Boundary Treatment Facility



Impact Area Groundwater Study Program

LEGEND

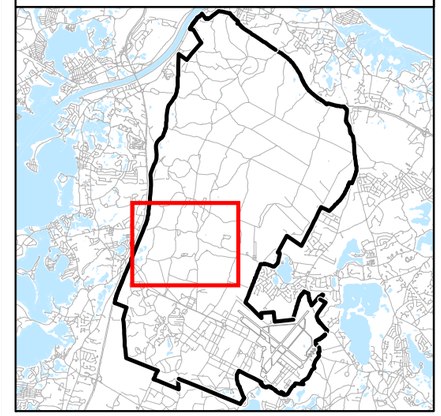
Wells in Hydraulic Monitoring Plan
- Monitoring Well
- Extraction Well
- Injection Well

Wells not in Hydraulic Monitoring Plan
- Monitoring Well
- Extraction Well

- Perchlorate Plume > 2 ppb
- RDX Plume > 0.6 ppb
- A A' Cross Section

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

Wells in Hydraulic Monitoring Plan
Environmental and System Performance Monitoring Report
Demo 1 Groundwater Operable Unit

0 1,000 Feet

N

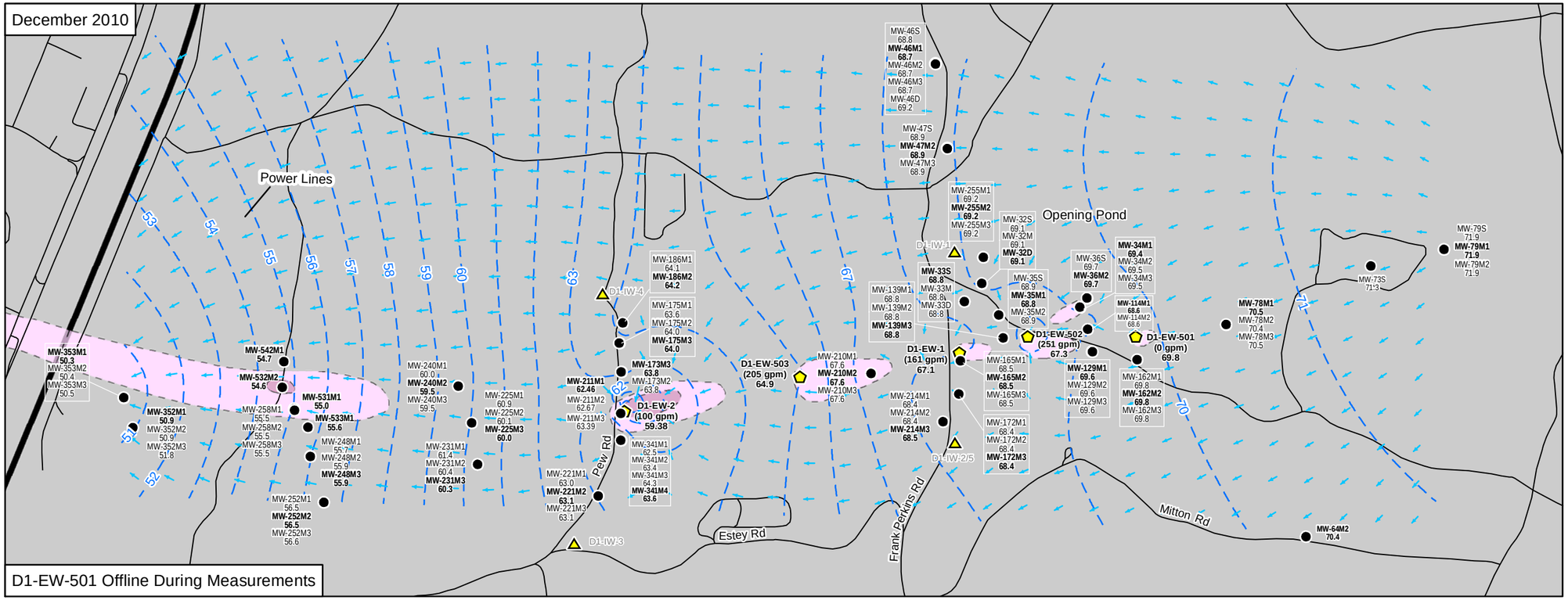
US Army Corps of Engineers
New England District

DRAFT

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January 30, 2012 DWN: MTW CHKD: MRK

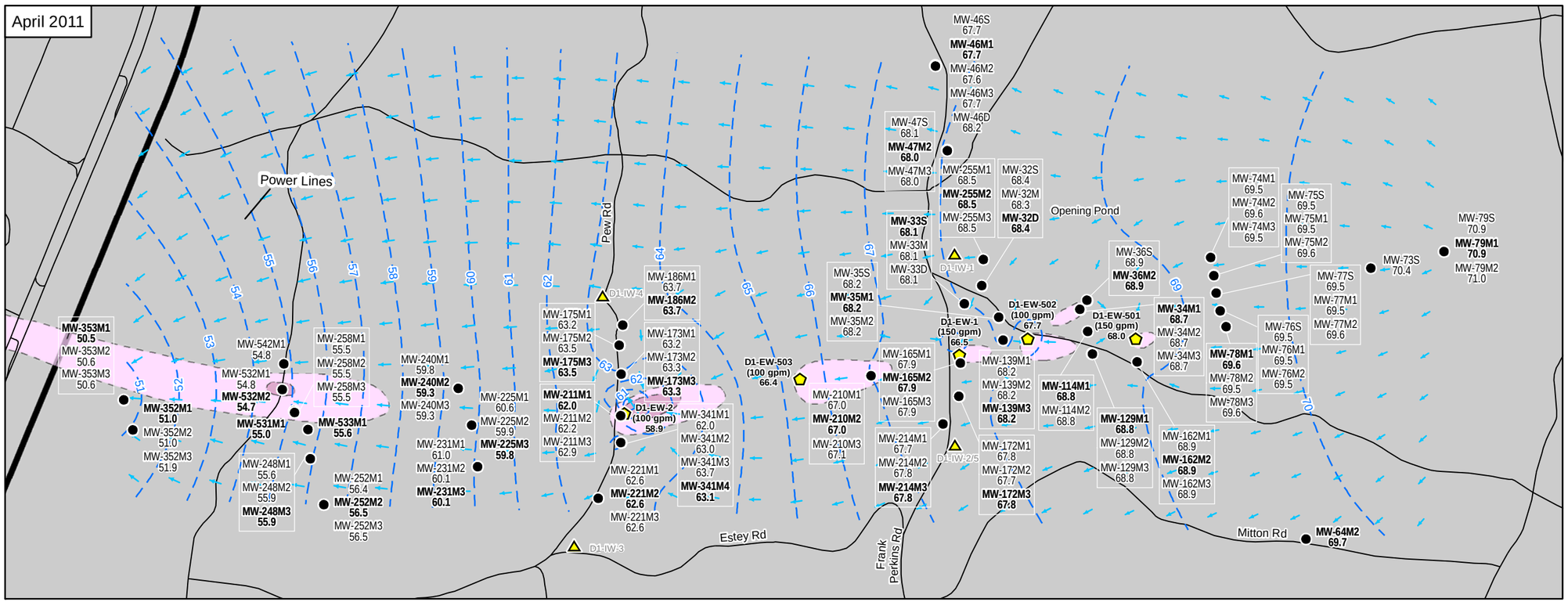
FIGURE 4-1

December 2010



D1-EW-501 Offline During Measurements

April 2011



Impact Area Groundwater Study Program

LEGEND

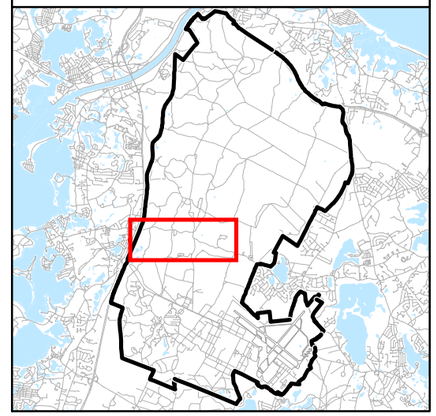
- Existing Monitoring Well
- Extraction Well
- Injection Well

Perchlorate in Groundwater

- 2 to 15 ppb
- 15 to 200 ppb
- Measured Groundwater Elevation Contours Under Pumping Conditions
- Groundwater Flow Vectors

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

Water Levels Under Design and Optimized Conditions
Winter 2010 (12/20/10)
and Spring 2011 (4/11/11)
Environmental and System
Performance Monitoring Report
Demo 1 Groundwater Operable Unit

0 1,000 Feet

N

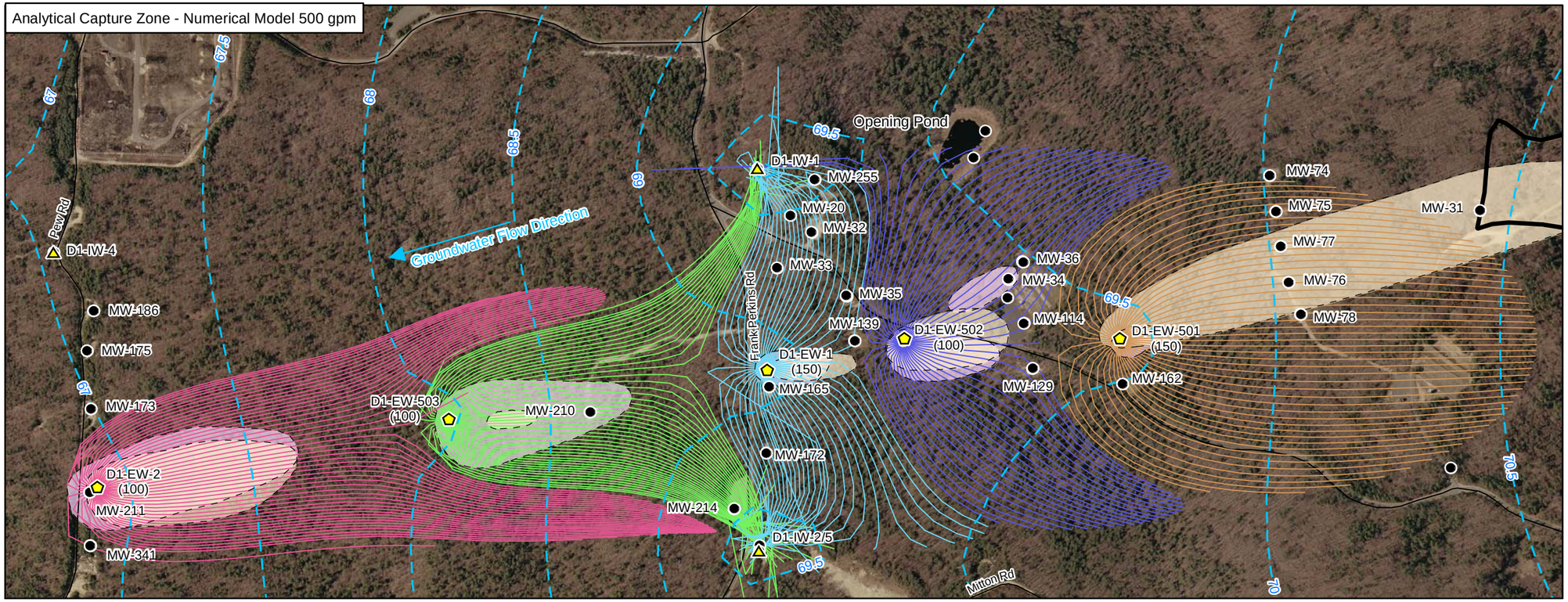
US Army Corps of Engineers
New England District

DRAFT

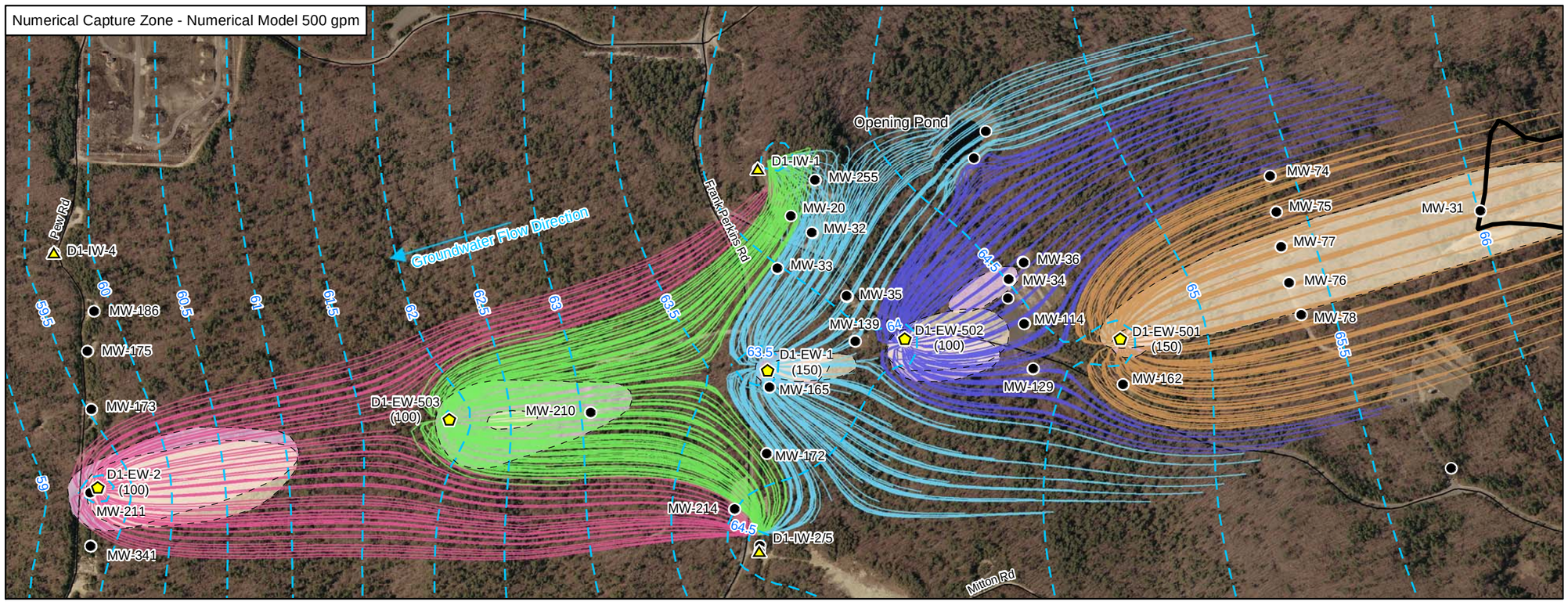
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January 23, 2012 DWN: MTW CHKD: MRK

FIGURE 4-2

Analytical Capture Zone - Numerical Model 500 gpm



Numerical Capture Zone - Numerical Model 500 gpm



Impact Area Groundwater Study Program

LEGEND

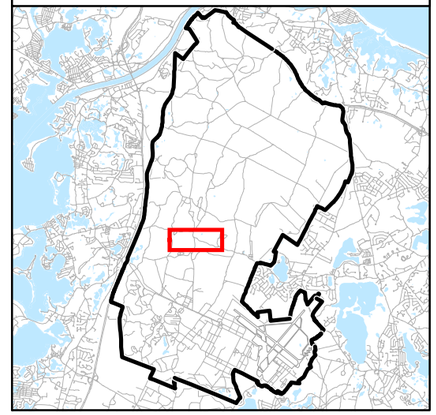
- Monitoring Well
- Extraction Well
- Injection Well
- (100) Extraction Well Flow Rate - gpm
- Perchlorate Plume > 2ppb
- RDX Plume > 0.6 ppb
- Model-Simulated Groundwater Elevation Contours Under Specified Pumping Conditions

Model-Simulated Streamlines defining Capture Zone

- D1-EW-1
- D1-EW-2
- D1-EW-501
- D1-EW-502
- D1-EW-503

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

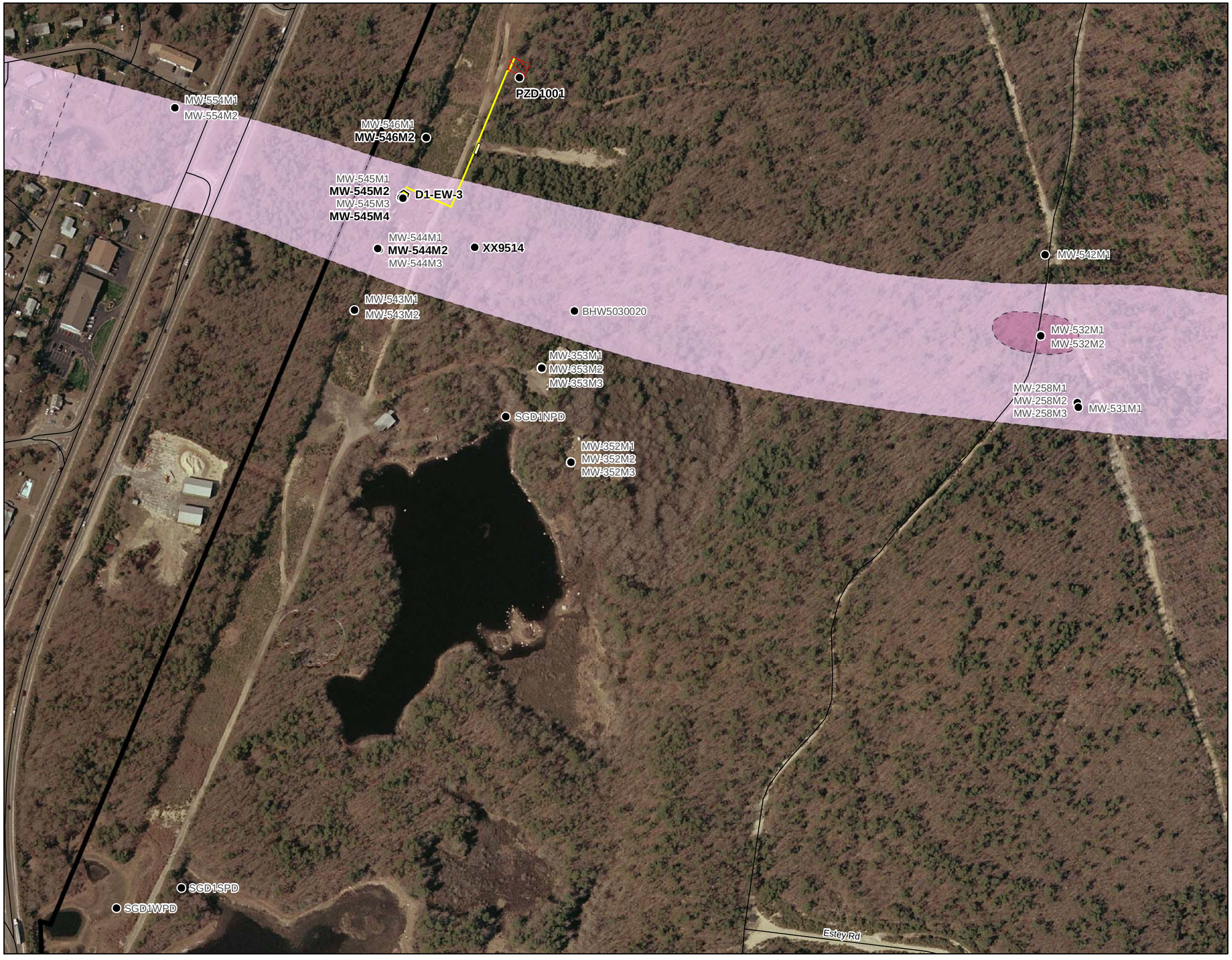
20 Year Analytical Capture Zones (Top) and Numerical Flow Model Capture Zones (Bottom) 500 gpm

US Army Corps of Engineers
New England District

DRAFT

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January 11, 2012 DWN: MTW CHKD: MRK

FIGURE 4-3



Impact Area Groundwater Study Program

LEGEND

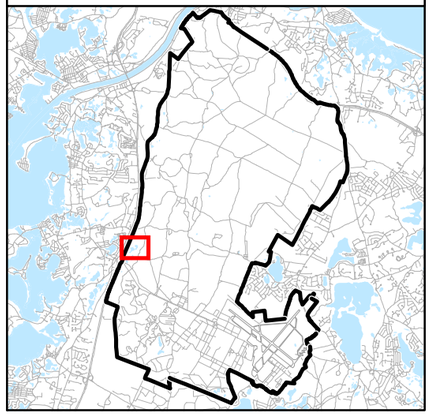
- Existing Monitoring Well
- Extraction Well
- MW-545M1 Manual Measurment
- **MW-545M2** Transducer
- Pipeline
- Mobile Treatment Unit
- Discharge Trench

Perchlorate in Groundwater

- 2 to 15 ppb
- 15 to 200 ppb

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

Demolition Area 1
System Startup Measurements

0 250 Feet

N

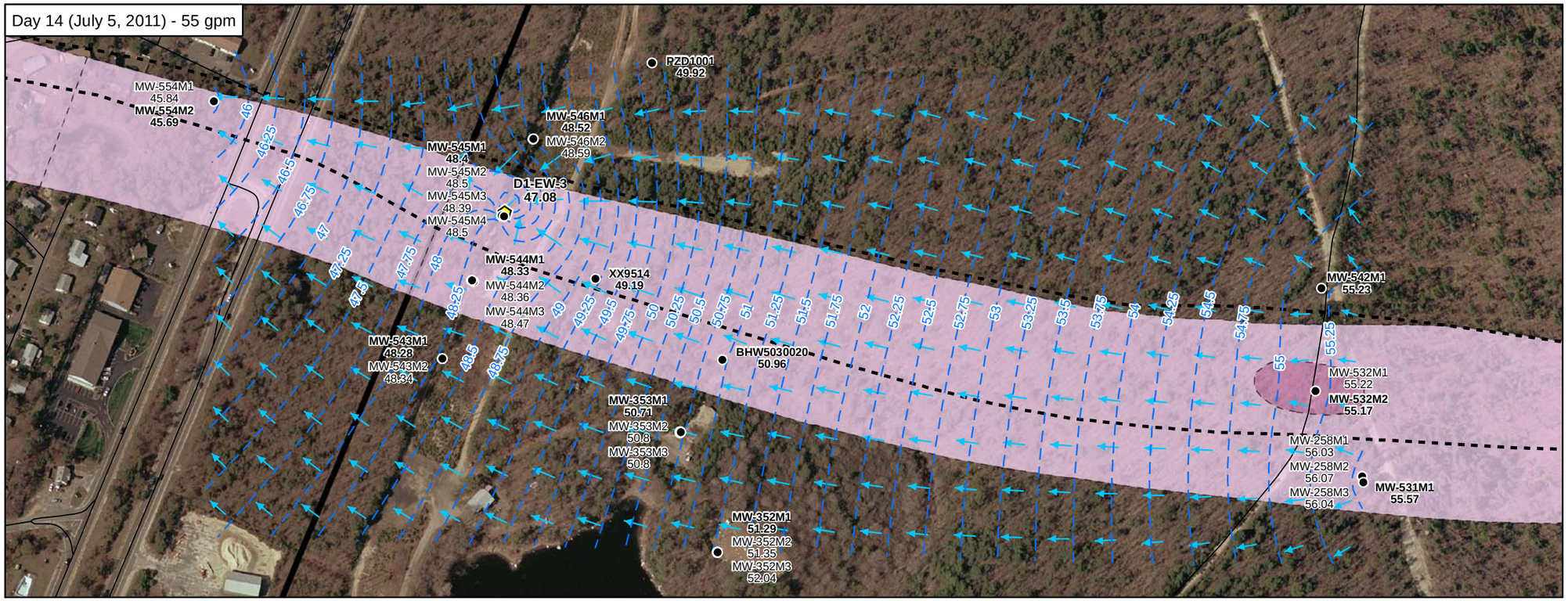
US Army Corps of Engineers
New England District

DRAFT

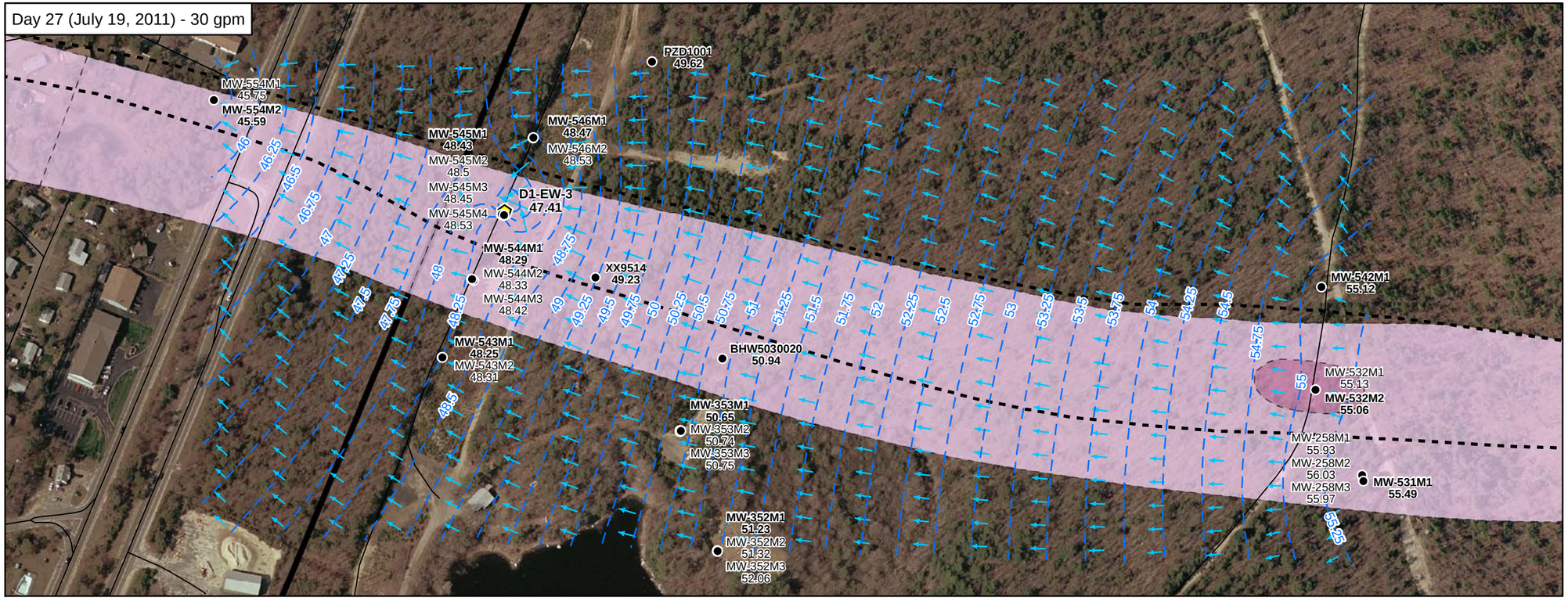
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January 17, 2012 DWN: MTW CHKD: MRK

FIGURE
4-4

Day 14 (July 5, 2011) - 55 gpm



Day 27 (July 19, 2011) - 30 gpm



Impact Area Groundwater Study Program

LEGEND

- Existing Monitoring Well
- Extraction Well
- Injection Well

Perchlorate in Groundwater, data through March 2011

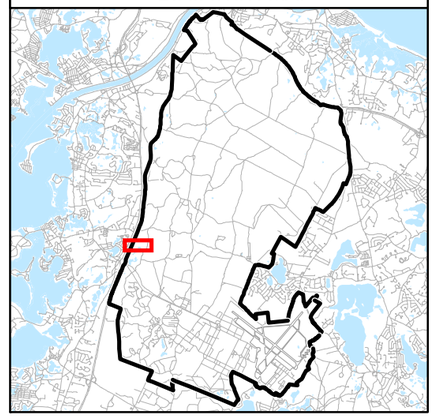
- > 2 ppb

Perchlorate in Groundwater, data through August 2011

- 2 to 15 ppb
- 15 to 200 ppb

- Measured Groundwater Elevation Contours Under Pumping Conditions

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

Water Levels Under Start-up Condition
Leading Edge Extraction Well
Day 14 (July 5, 2011) - 55 gpm and
Day 27 (July 29, 2011) - 30 gpm
Environmental and System
Performance Monitoring Report
Demo 1 Groundwater Operable Unit

0 250 Feet

N

US Army Corps of Engineers
New England District

DRAFT

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March 2, 2012 DWN: MTW CHKD: MRK

FIGURE
4-5

Impact Area Groundwater Study Program

LEGEND

- Extraction Well
- Injection Well
- Monitoring Well
- Staff Gauge
- Drivepoint

Perchlorate Detections in Groundwater

- No Detection
- Detection at or below 2 µg/L
- Detection above 2 µg/L
- Indicates different detections in different well screens

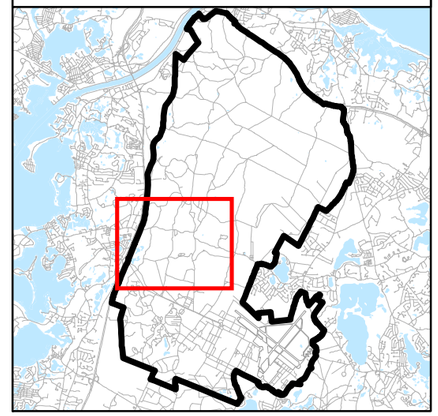
Perchlorate in Groundwater

- 2 to 15 ppb
- 15 to 200 ppb

A A' Cross Section

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

Perchlorate Distribution in Groundwater
As of August 2011 Sampling Round
Environmental and System Performance Monitoring Report
Demo 1 Groundwater Operable Unit

0 1,000 Feet

N

US Army Corps of Engineers
New England District

DRAFT

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March 2, 2012 DWN: MTW CHKD: MRK

FIGURE 5-1

Impact Area Groundwater Study Program

LEGEND

- Extraction Well
- Injection Well
- Monitoring Well
- Staff Gauge
- Drivepoint

RDX Detections in Groundwater

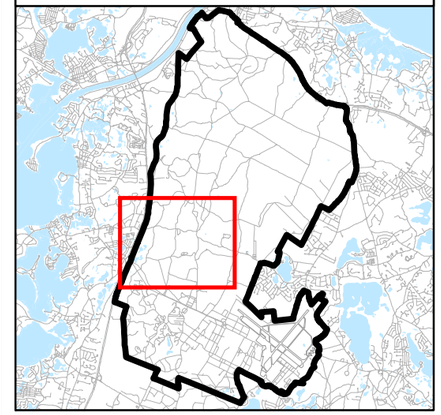
- No Detection
- Detection at or below 0.6 µg/L
- Detection above 0.6 µg/L
- Indicates different detections in different well screens

RDX in Groundwater

- 0.6 to 2 ppb
- 2 to 20 ppb
- 20 to 200 ppb
- Extension of RDX plume based on Profile Samples
- A A' Cross Section

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

RDX Distribution in Groundwater
As of August 2011 Sampling Round
Environmental and System Performance Monitoring Report
Demo 1 Groundwater Operable Unit

0 1,000 Feet

N

US Army Corps of Engineers
New England District

DRAFT

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December 9, 2011 DWN: MTW CHKD: MRK

FIGURE 5-2

WEST

A'

EAST

A

Elevation (Feet Mean Sea Level, NGVD)

PEW ROAD

FRANK PERKINS ROAD

GROUND SURFACE

MW-225

EW-D1-2
MW-211

EW-D1-503

MW-210

EW-D1-1
MW-165

EW-D1-502

MW-114

EW-D1-501

MW-76

MW-31

MW-19

MW-79

FINE TO MEDIUM SAND, TRACE GRAVEL

FINE TO COARSE SAND, SOME FINE GRAVEL

FINE TO COARSE SAND SOME FINE GRAVEL

WATER TABLE (4/10/2009)

WL=58.13

WL=60.91

WL=62.06

WL=57.01

WL=64.66

WL=65.47

WL=63.99

WL=63.98

WL=66.19

WL=65.15

WL=66.95

WL=67.52

WL=68.33

MEDIUM TO COARSE SAND, TRACE GRAVEL

SAND, LITTLE GRAVEL

FINE TO MEDIUM SAND, SOME SILT & GRAVEL

P=0.072 08/24/2011

P=0.05J 08/24/2011

P=0.35U 04/11/2007

P=7.92 08/09/2011

P=0.042J 04/26/2011

P=0.031J 04/26/2011

P=602 04/26/2011

P=0.4 08/23/2011

P=0.031J 04/19/2011

P=2.81 04/19/2011

P=0.288 04/19/2011

P=0.515 08/23/2011

P=0.027J 4/19/2011

P=0.233 4/19/2011

P=0.015J 4/19/2011

P=1.57 08/23/2011

P=0.7 04/12/2011

P=0.401 4/12/2011

P=0.324 08/23/2011

P=0.744 4/20/2011

P=0.921 04/20/2011

P=0.296 04/20/2011

P=0.303 04/18/2011

P=0.456 04/18/2011

P=0.35U 4/27/2007

P=0.293 04/18/2011

P=0.35U 04/27/2007

P=0.35U 04/27/2007

P=0.35U 04/27/2007

P=1U 09/27/2003

FINE TO MEDIUM SAND, SOME SILT

CLAY

SILT

SAND, SILT & GRAVEL

CLAY

SAND & SILT

FINE TO MEDIUM SAND, SOME SILT

FINE SAND, LITTLE SILT

FINE SAND, SOME SILT

FINE SAND, SOME SILT

SAND & GRAVEL

CLAY

SAND & SILT

SAND

SAND & GRAVEL

CLAY

FINE TO MEDIUM SAND

BEDROCK

COARSE SAND & SOME GRAVEL

FINE TO MEDIUM SAND

COARSE SAND TRACE COARSE GRAVEL

GRAVEL

TILL

BEDROCK

NOTES:

1. FOR ORIENTATION OF CROSS SECTION, SEE FIGURE 5-1.
2. NGVD = NATIONAL GEODETIC VERTICAL DATUM
3. SAMPLE COLLECTION DATES FOR EACH MONITORING WELL IDENTIFIED ADJACENT TO OR BENEATH RESULTS FOR EACH WELL.
4. CONCENTRATIONS IN UG/L
5. U = NON-DETECT, J = ESTIMATED CONCENTRATION.

LEGEND

GEOLOGIC UNITS

- SAND
- BEDROCK
- CLAY
- Water table

PERCHLORATE CONCENTRATIONS

- 2.0 ug/l - < 15 ug/l
- 15 ug/l - < 200 ug/l
- > 200 ug/l

SCREEN DESIGNATION

M1

RDX = ND
6/6/02

GROUNDWATER CONCENTRATION AT WELL

WELL SCREEN LOCATION

HORIZONTAL SCALE: 1"=800'
0' 400' 800'

0' 30' 60'
VERTICAL SCALE: 1"=60'

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

MASSACHUSETTS MILITARY RESERVATION
CAPE COD, MASSACHUSETTS
IMPACT AREA GROUNDWATER STUDY PROGRAM
DEMOLITION AREA 1
PLUME CROSS SECTION A-A'
PERCHLORATE DISTRIBUTION IN GROUNDWATER AS OF AUGUST 2011
2011 ESPM REPORT, RA SYSTEM DEMO 1 GW OU

DATE: 01/27/2012
PLOT SCALE: 1"=60'-0"
FILE NAME: DEMO1_PER_AA_Fig-A-A_01-27-2012.DGN

FIGURE 5-3

WEST

A'

EAST

A

Elevation (Feet Mean Sea Level, NGVD)

MW-225 | EW-D1-2 MW-211 | EW-D1-503 | MW-210 | EW-D1-1 MW-165 | EW-D1-502 | MW-114 | EW-D1-501 | MW-76 | MW-31 | MW-19 | MW-79

WL=49.84 WL=53.95 WL=58.13 WL=57.01 WATER TABLE (4/10/2009) WL=62.06 WL=64.66 WL=65.47 WL=64.36 WL=63.98 WL=66.19 WL=65.15 WL=66.95 WL=67.52 WL=68.33

RDX=0.22U 04/26/2011
60.91
RDX= 0.22U 08/24/2011
RDX= 0.206U 08/24/2011
RDX=0.272U 04/11/2007
RDX=1.15 08/09/2011
RDX=0.22U 04/26/2011
RDX=14.9 04/26/2011
RDX=0.206UJ 08/23/2011
RDX=0.222UJ 04/19/2011
RDX=0.206UJ 04/19/2011
RDX=0.144J 08/23/2011
RDX=0.222U 04/19/2011
RDX=0.222U 04/19/2011
RDX=0.23U 04/19/2011
RDX=0.227U 04/19/2011
RDX=0.215U 04/12/2011
RDX=1.69 08/23/2011
RDX=0.218U 04/12/2011
RDX=1.96 08/23/2011
RDX=0.291 04/20/2011
RDX=5.8 04/20/2011
RDX=3.59 04/20/2011
RDX=3.06 04/18/2011
RDX=6.88 04/18/2011
RDX=0.278U 04/27/2007
RDX=12.3 04/18/2011
RDX=0.275U 04/27/2007
RDX=0.281U 04/27/2007
RDX=0.291U 04/27/2007
RDX=0.25U 07/17/1998

M1 M2 M3 S M D

0.6 2 20

-220 -210 -200 -190 -180 -170 -160 -150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

LEGEND

RDX CONCENTRATIONS

- 0.6 ug/l – 2.0 ug/l
- 2.0 ug/l – 20 ug/l
- 20 ug/l – 200 ug/l
- > 200 ug/l

GEOLOGIC UNITS

- SAND
- CLAY
- BEDROCK

SCREEN DESIGNATION

M1 — RDX = ND 6/6/02 — GROUNDWATER CONCENTRATION AT WELL

WELL SCREEN LOCATION

HORIZONTAL SCALE: 1"=1000'
0' 500' 1000'

0' 30' 60'
VERTICAL SCALE: 1"=60'

NOTES:

1. FOR ORIENTATION OF CROSS SECTION, SEE FIGURE X–X.
2. GEOLOGIC CONDITION BETWEEN EXPLORATIONS ARE AN INTERPRETATION OF AVAILABLE DATA. ACTUAL CONDITIONS MAY VARY.
3. NGVD = NATIONAL GEODETIC VERTICAL DATUM
4. SAMPLE COLLECTION DATES FOR EACH MONITORING WELL IDENTIFIED ADJACENT TO OR BENEATH RESULTS FOR EACH WELL.
5. CONCENTRATIONS IN ug/l
6. U = NON–DETECT, J = ESTIMATED CONCENTRATION.

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

MASSACHUSETTS MILITARY RESERVATION
CAPE COD, MASSACHUSETTS
IMPACT AREA GROUNDWATER
STUDY PROGRAM
DEMOLITION AREA 1
PLUME CROSS SECTION A-A'
RDX DISTRIBUTION IN GROUNDWATER AS OF AUGUST 2011
2011 ESPM REPORT, RA SYSTEM DEMO 1 GW OU

DATE: 03/01/2012 | FILE NAME: DEMO1_RDX_AA_Fig-5-4_03-01-2012.DGN | FIGURE 5-4
PLOT SCALE: 1"=60'

SOUTH

B

NORTH

B'

Elevation (Feet Mean Sea Level, NGVD)

MW-543 Profile
MW-543

MW-544 Profile
MW-544

95-14 PROJECTED 265 WEST

DI-EW-3
MW-545 Profile
MW-545

MW-545 PROFILE
MW-546

WATER TABLE (10/14/2010)

WL=47 MSL

BEDROCK

4AA-0.05
4BA-0.05
4CA-0.06
4DA-0.11
4CA-0.12
4FA-0.09
4GA-0.09
4HA-0.09
4IA-0.10

P=0.15J
06/23/2011

P=0.11J
06/23/2011

P=0.072J
06/21/2011

P=0.11J
06/22/2011

P=4.14
07/20/2011

3AA-0.11
3BA-0.08
3CA-0.11
3DA-0.06
3EA-0.07
3FA-0.13
3GA-0.54
3HA-0.40
3IA-0.50
3JA-0.80
3KA-0.95
3LA-0.33
3MA-0.81
3NA-0.35

P=9.59
08/23/2011

P=2.47
08/17/2011

P=2.54
06/16/2011

P=7.0
06/16/2011

P=7.05
06/16/2011

P=4.16
06/20/2011

2AA-1.62
2BA-3.42
2CA-4.59
2DA-6.58
2EA-11.7
2FA-12.8
2GA-2.08
2HA-4.06
2IA-7.70
2JA-12.3E
2KA-0.95
2LA-0.87
2MA-0.96
2NA-0.056J

1AA-0.068
1BA-0.11
1CA-0.17
1DA-0.14
1EA-0.14
1FA-0.21
NO SAMPLE
1GA-0.2
1HA-0.19
1IA-0.19
1JA-0.18
1KA-0.11
1LA-0.13
1MA-0.13

P=0.19J
06/20/2011

P=0.27
06/20/2011

NOTES:

1. FOR ORIENTATION OF CROSS SECTION, SEE FIGURE 5-1.
2. NGVD = NATIONAL GEODETIC VERTICAL DATUM
3. SAMPLE COLLECTION DATES FOR EACH MONITORING WELL IDENTIFIED ADJACENT TO OR BENEATH RESULTS FOR EACH WELL.
4. CONCENTRATIONS IN UG/L
5. U = NON-DETECT, J = ESTIMATED CONCENTRATION.

GEOLOGIC UNITS

- SAND
- BEDROCK
- CLAY
- Water table

LEGEND

PERCHLORATE CONCENTRATIONS

- 2.0 ug/l - < 15 ug/l
- 15 ug/l - < 200 ug/l
- > 200 ug/l

SCREEN DESIGNATION

M1

RDX = ND
6/6/02

GROUNDWATER CONCENTRATION AT WELL

WELL SCREEN LOCATION

2AA-1.62

SAMPLE INTERVAL

SONIC BORING LOCATION

PERCHLORATE SCREEN RESULT

HORIZONTAL SCALE: 1"=60'
0' 30' 60'

0' 30' 60'
VERTICAL SCALE: 1"=60'

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

MASSACHUSETTS MILITARY RESERVATION
CAPE COD, MASSACHUSETTS
IMPACT AREA GROUNDWATER
STUDY PROGRAM
DEMOLITION AREA 1
PLUME CROSS SECTION B-B'
PERCHLORATE DISTRIBUTION IN
GROUNDWATER AS OF AUGUST 2011
2011 ESPM REPORT, RA SYSTEM DEMO 1 GW OU

DATE: 03/01/2012
PLOT SCALE: 1"=60'-0"
FILE NAME: DEMO1_PER_BB_Fig-5-5_03-01-2012.DGN

FIGURE 5-5

WEST

A"

EAST

A'

Elevation (Feet Mean Sea Level, NGVD)

MW-559 PROJECTED 200' NORTH

MW-557 PROJECTED 200' SOUTH

ESTIMATED GROUND SURFACE ELEVATION

LILY POND WL=37.50

MW-559

DP-557

DP-556

DP-556

MW-554

℄ ROUTE 28

MW-545

DI-EW-3

95-14 (GS=56.90)

WELL 95-14 PROJECTED 175' NORTH

MW-532 (GS=110.45)

MW-225 (GS=152.28)

WL=45.02

SILT WITH FINE SAND

WL=48.63

WL=49.37

NORTH POND

WL=57.83

FINE TO COARSE SAND WITH FINE GRAVEL

FINE SAND, TRACE GRAVEL FINE BOULDER

FINE TO MEDIUM SAND, TRACE GRAVEL

FINE TO COARSE SAND, SOME FINE GRAVEL

FINE TO COARSE SAND SOME FINE GRAVEL

FINE TO COARSE SAND WITH FINE GRAVEL

DENSE FINE GRAINED, SILTY SAND

FINE TO MEDIUM SAND, SOME SILT

CLAY

FINE TO MEDIUM SAND, SOME SILT

FINE GRAINED SILTY SAND

FINE SAND, SOME TO LITTLE SILT

CLAY

FINE GRAINED SILTY SAND

FINE TO COARSE SAND WITH FINE GRAVEL

MEDIUM-FINE SAND

CLAY

FINE-MEDIUM SAND

FINE GRAINED SAND, TRACE MEDIUM SAND/FINE GRAVEL

FINE TO MEDIUM SAND

CLAY

CLAY

BEDROCK

P=0.072 08/24/2011

P=0.05U 08/24/2011

P=0.35U 04/11/2007

P=2.54 06/16/2011

P=2.68 6/29/2011

P=7.0 06/16/2011

P=5.38 6/29/2011

P=7.05 06/16/2011

P=4.16 06/16/2011

P=2.47 08/17/2011

P=9.59 06/16/2011

95-14

P=16.3 8/22/2011

P=8.62 8/22/2011

NOTES:

1. FOR ORIENTATION OF CROSS SECTION, SEE FIGURE 5-1.
2. NGVD = NATIONAL GEODETIC VERTICAL DATUM
3. SAMPLE COLLECTION DATES FOR EACH MONITORING WELL IDENTIFIED ADJACENT TO OR BENEATH RESULTS FOR EACH WELL.
4. CONCENTRATIONS IN UG/L
5. U = NON-DETECT, J = ESTIMATED CONCENTRATION.
6. GROUNDWATER ELEVATIONS BASED ON HISTORIC REGIONAL TRENDS.
7. MW = MONITORING WELL.
8. DP = DIRECT PUSH BORING.
9. BATHYMETRY AT LILY POND BASED ON DIVISION OF FISHERIES AND WILDLIFE DATA AT ADJACENT FLAX POND.

GEOLOGIC UNITS

- SAND
- BEDROCK
- CLAY
- Water table

LEGEND

PERCHLORATE CONCENTRATIONS

- 2.0 ug/l - < 15 ug/l
- 15 ug/l - < 200 ug/l
- > 200 ug/l

SCREEN DESIGNATION

M1

RDX = ND 6/6/02

GROUNDWATER CONCENTRATION AT WELL

WELL SCREEN LOCATION

-62

-72

PROPOSED SCREEN

HORIZONTAL SCALE: 1"=500'

0' 250' 500'

0' 30' 60'

VERTICAL SCALE: 1"=60'

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT
CORPS OF ENGINEERS
CONCORD, MASSACHUSETTS

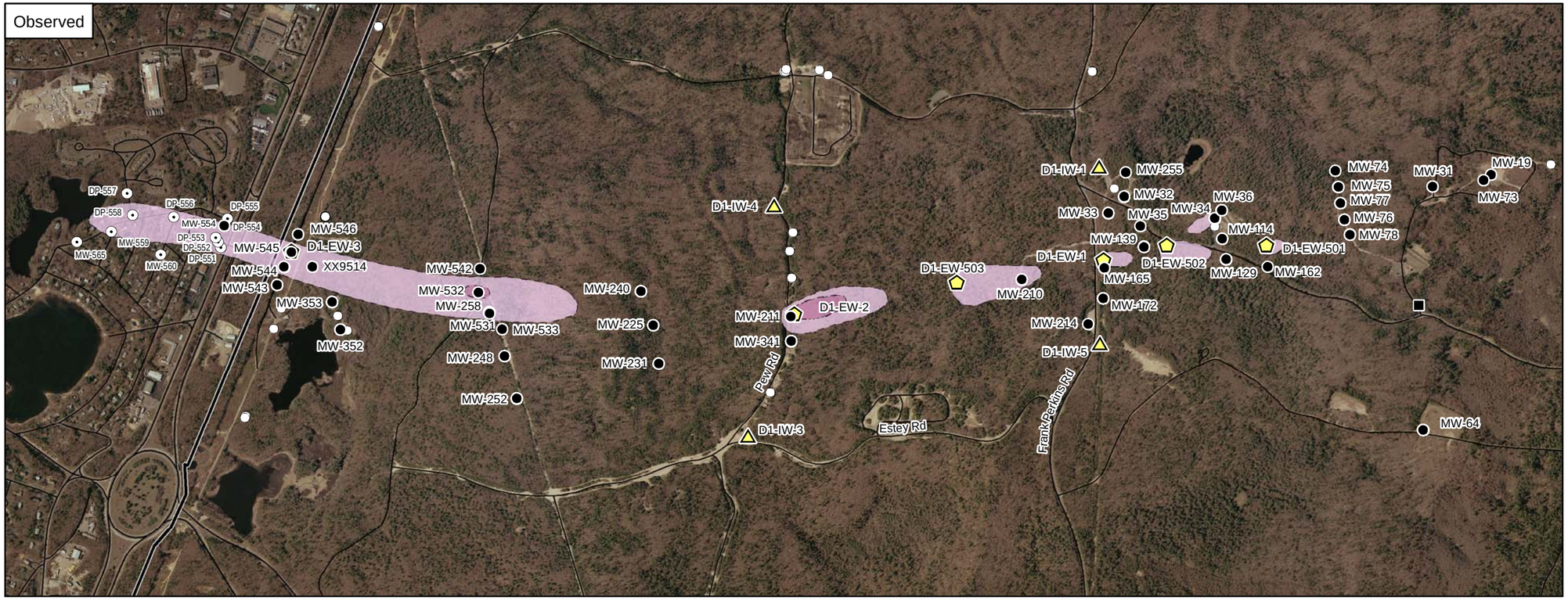
MASSACHUSETTS MILITARY RESERVATION
CAPE COD, MASSACHUSETTS
IMPACT AREA GROUNDWATER STUDY PROGRAM
DEMOLITION AREA 1
PLUME CROSS SECTION A'-A"
PERCHLORATE DISTRIBUTION IN GROUNDWATER AS OF AUGUST 2011

DATE: 06/13/2012
PLOT SCALE: 1"=60'-0"

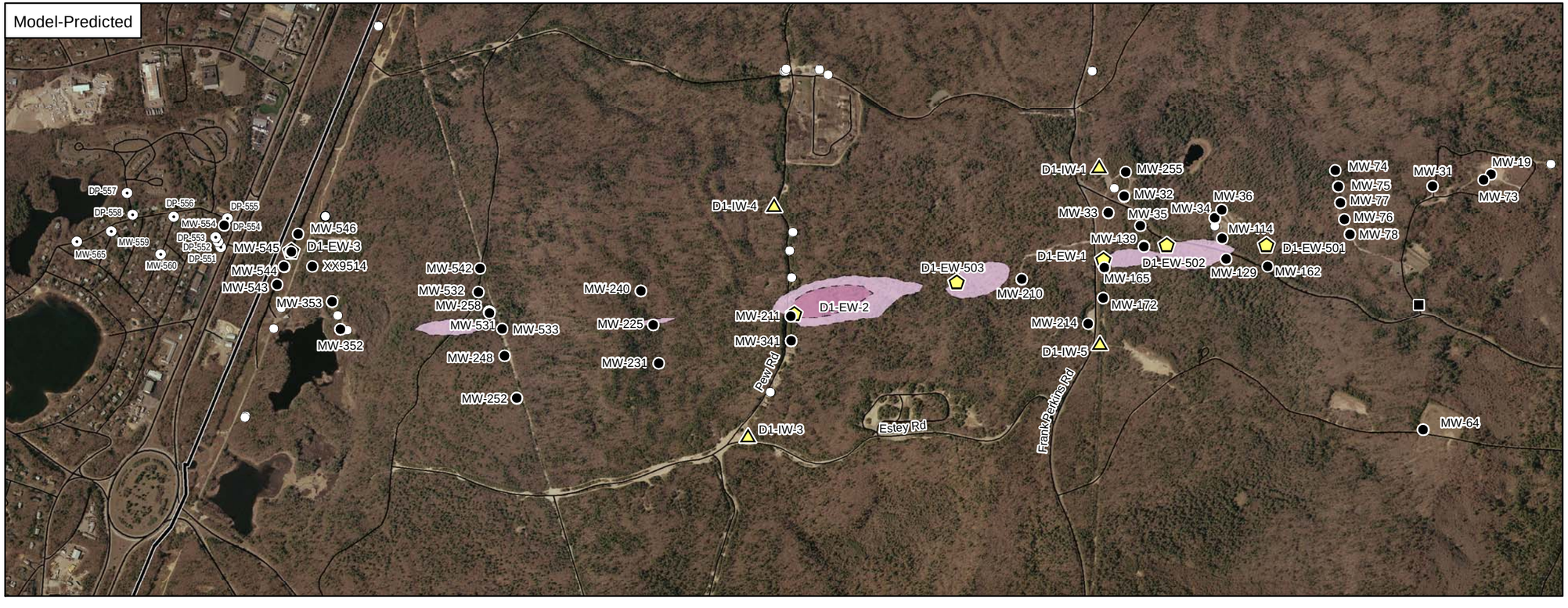
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FIGURE 5-6

Observed



Model-Predicted



Impact Area Groundwater Study Program

LEGEND

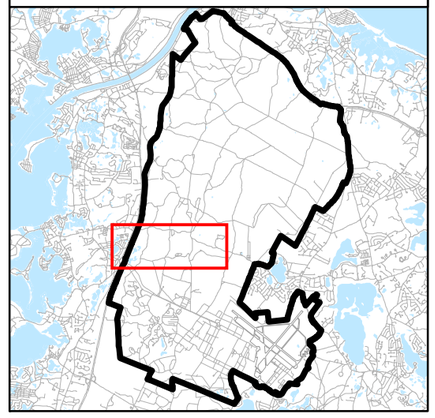
- Extraction Well
- Injection Well
- Monitoring Well Included in the Network
- Monitoring Well Not Included in the Network

Perchlorate in Groundwater

- 2 to 15 ppb
- 15 to 200 ppb

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

Model-Predicted and Observed Perchlorate Distribution in Groundwater As of August 2011 Sampling Round Environmental and System Performance Monitoring Report Demo 1 Groundwater Operable Unit

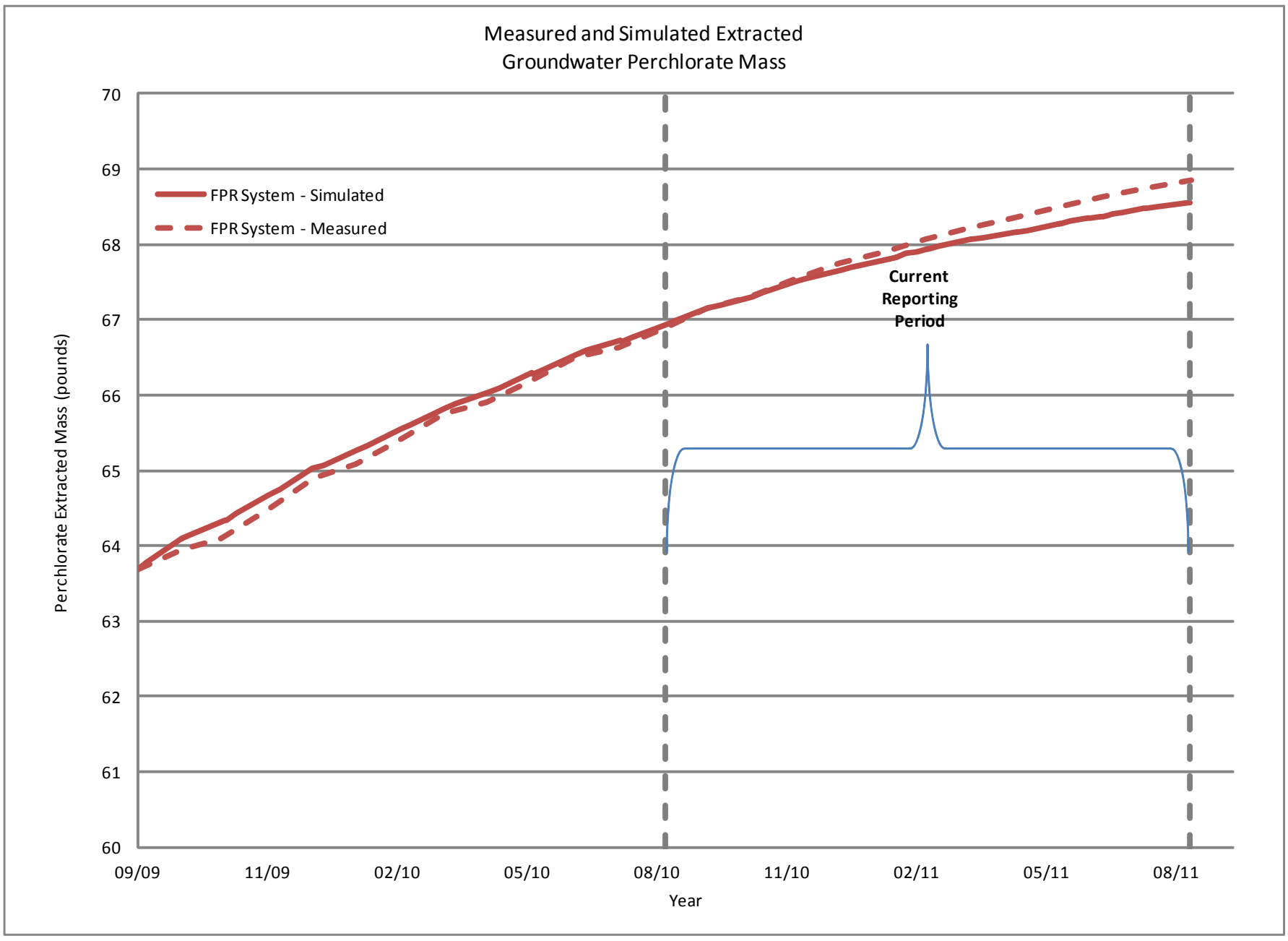
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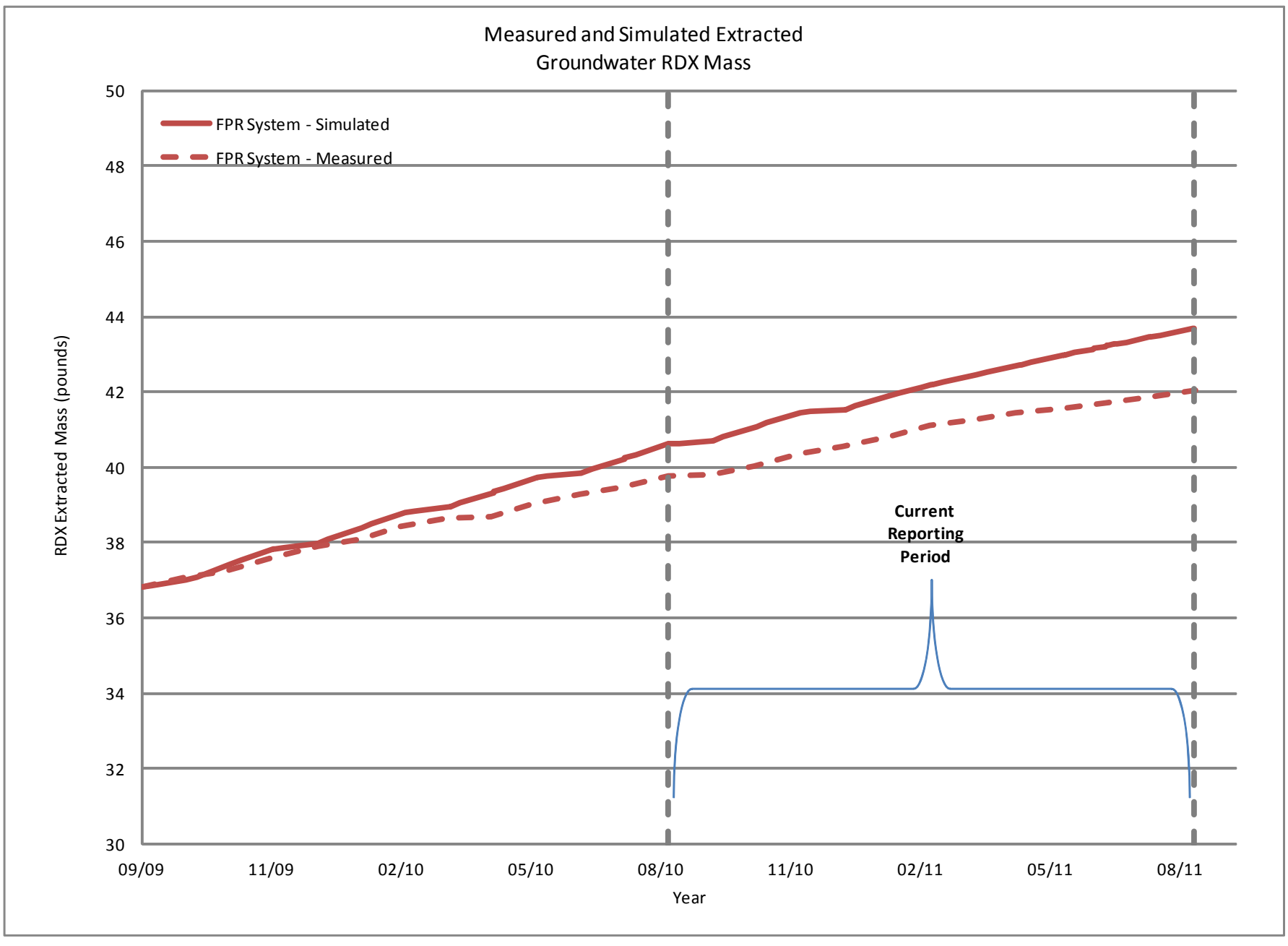
US Army Corps of Engineers
New England District

DRAFT

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March 2, 2012 DWN: MTW CHKD: MRK

FIGURE 6-1





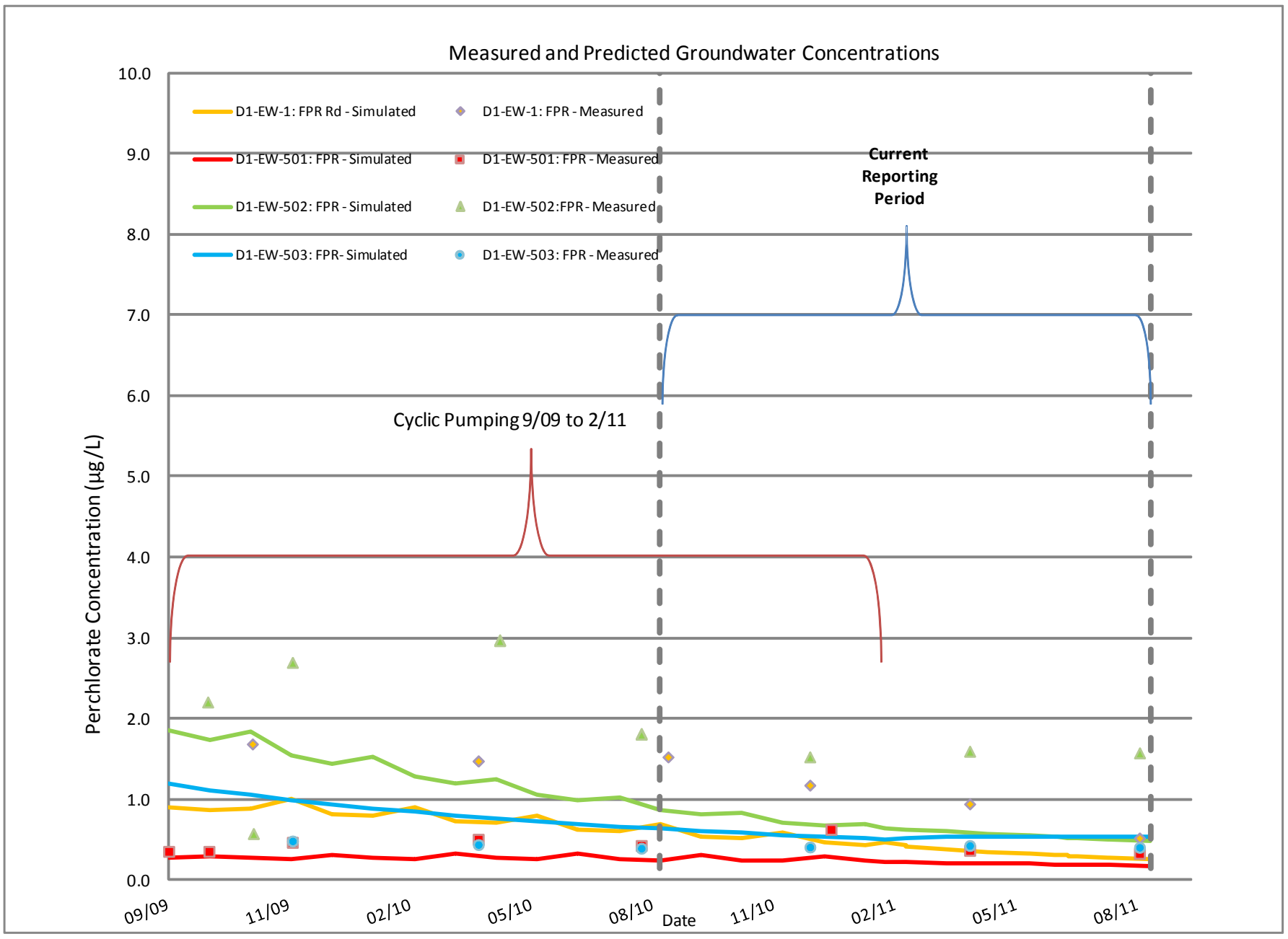
US Army Corps of Engineers
New England District

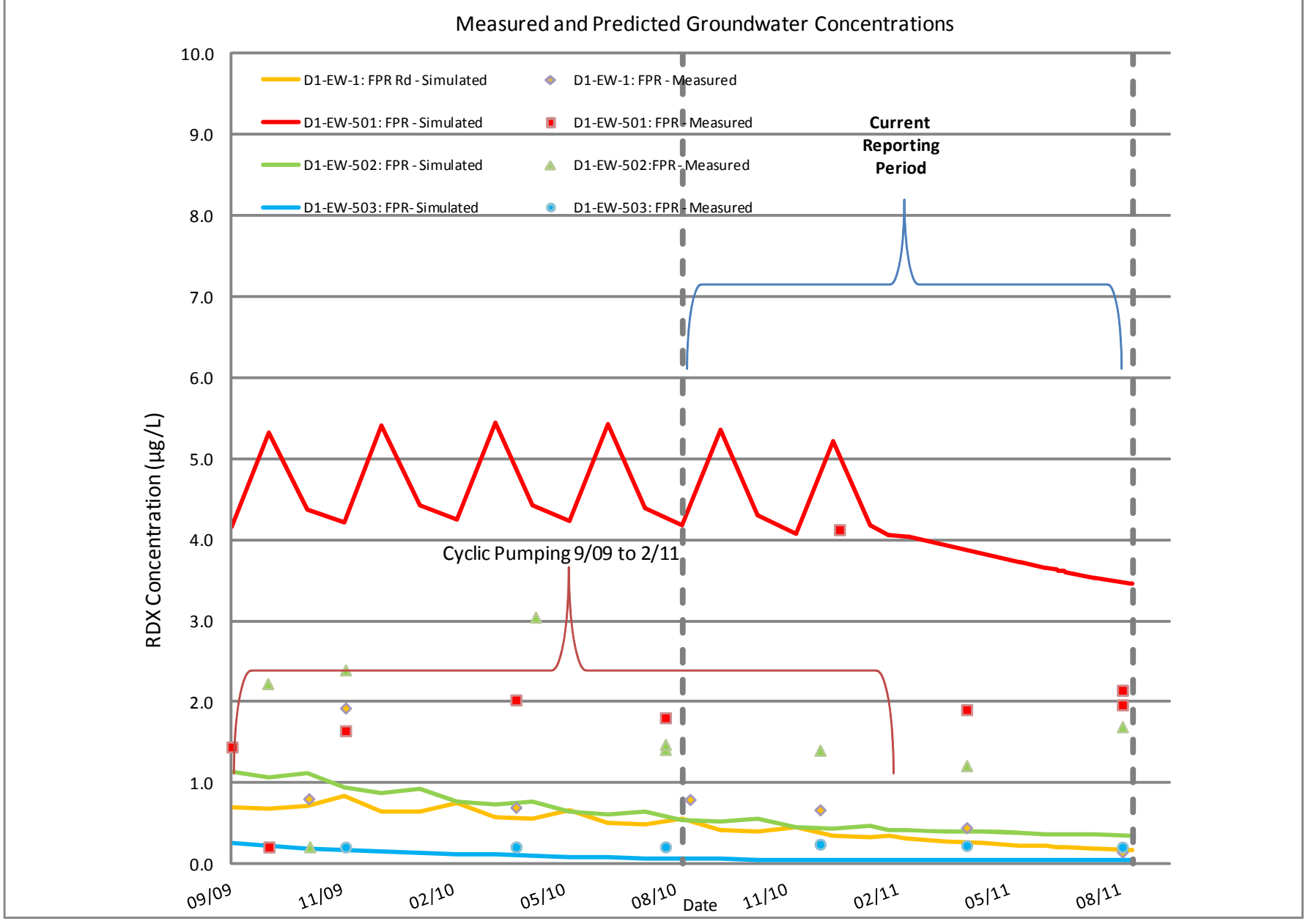
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February 2, 2012 DWN: MTW CHKD: MRK

Measured and Simulated Extracted Groundwater Mass -
Perchlorate (Top Pane) and RDX (Bottom Pane)
Frank Perkins Road System
Demo 1 Groundwater Operable Unit

FIGURE
6-2

Impact Area
Groundwater Study Program





US Army Corps of Engineers
New England District

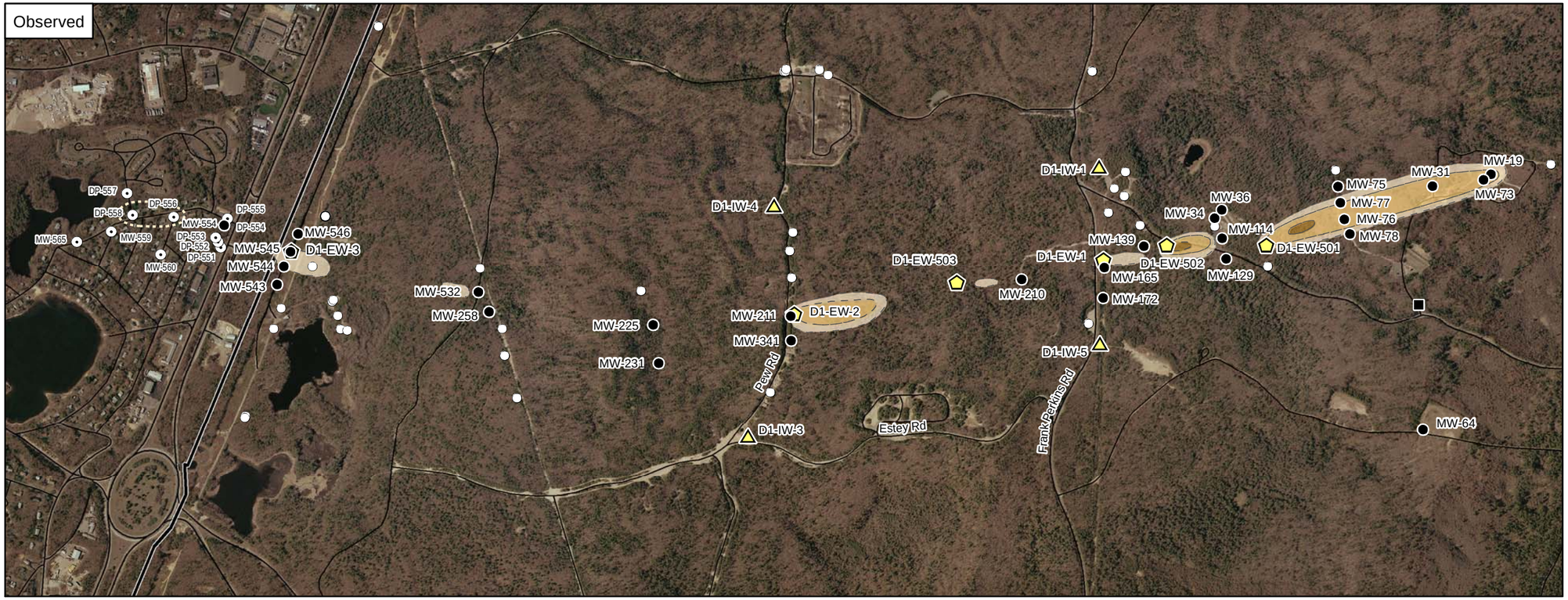
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December 9, 2011 DWN: MTW CHKD: MRK

Measured and Predicted Groundwater Concentrations -
Perchlorate (Top Pane) and RDX (Bottom Pane)
Frank Perkins Road System
Demo 1 Groundwater Operable Unit

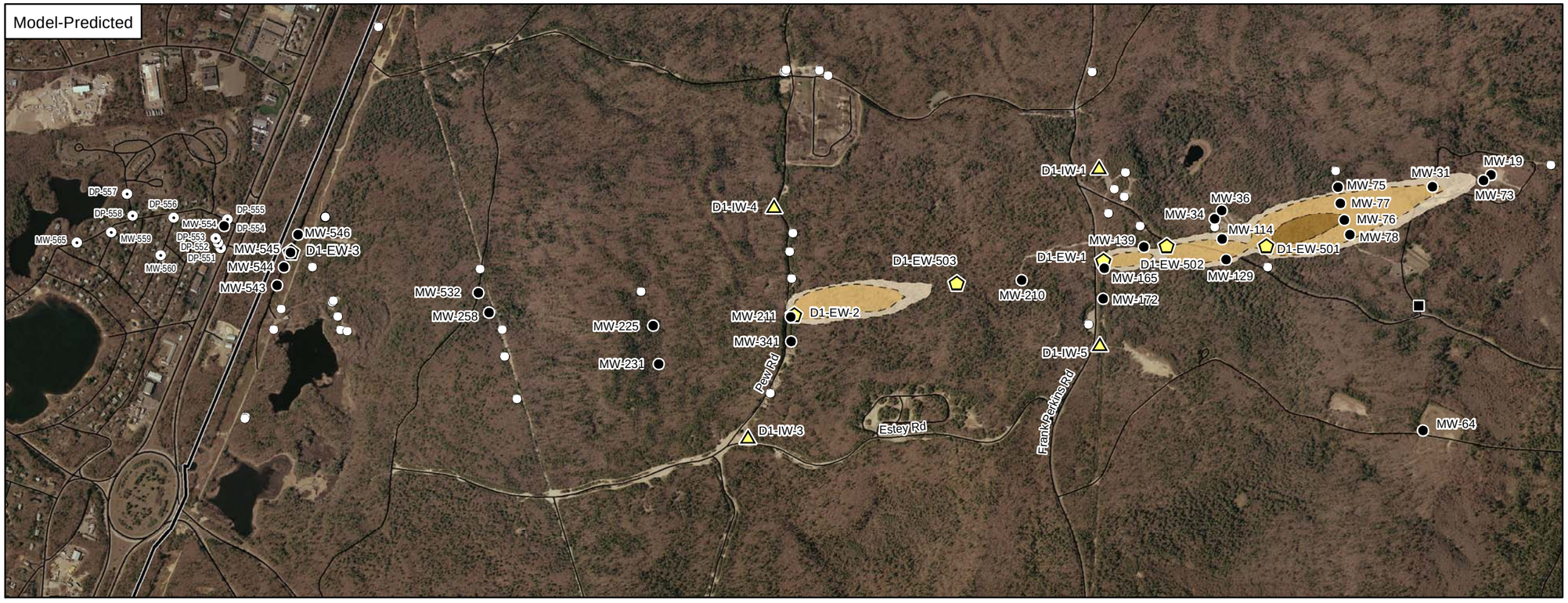
FIGURE
6-3

Impact Area
Groundwater Study Program

Observed



Model-Predicted



Impact Area Groundwater Study Program

LEGEND

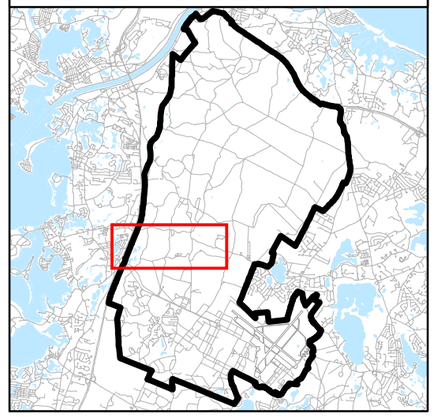
- Extraction Well
- Injection Well
- Monitoring Well Included in the Network
- Monitoring Well Not Included in the Network

RDX in Groundwater

- 0.6 to 2 ppb
- 2 to 20 ppb
- 20 to 200 ppb
- Extension of RDX Plume based on Profile Samples

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

Model-Predicted and Observed
RDX Distribution in Groundwater
As of August 2011 Sampling Round
Environmental and System
Performance Monitoring Report
Demo 1 Groundwater Operable Unit

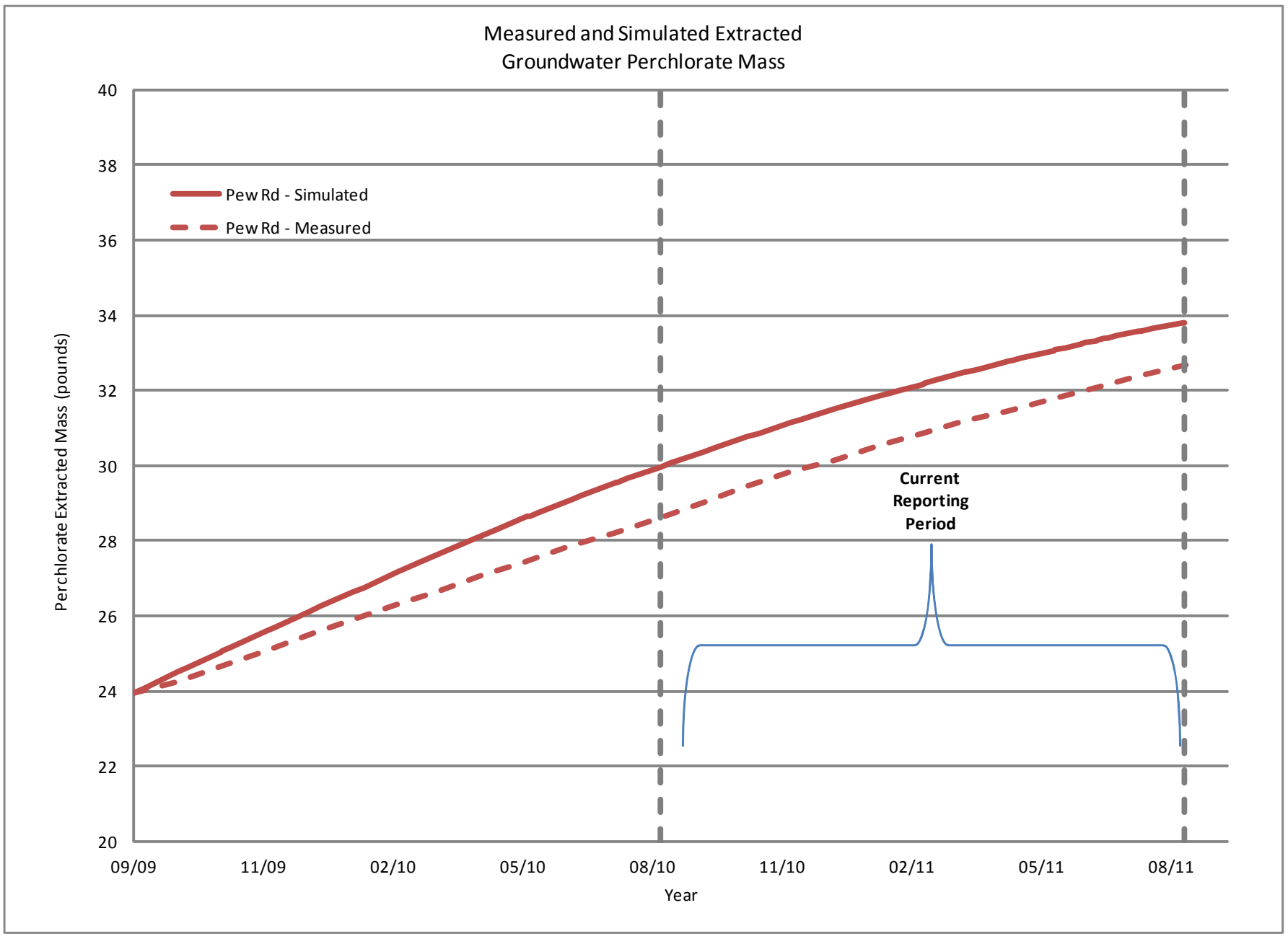
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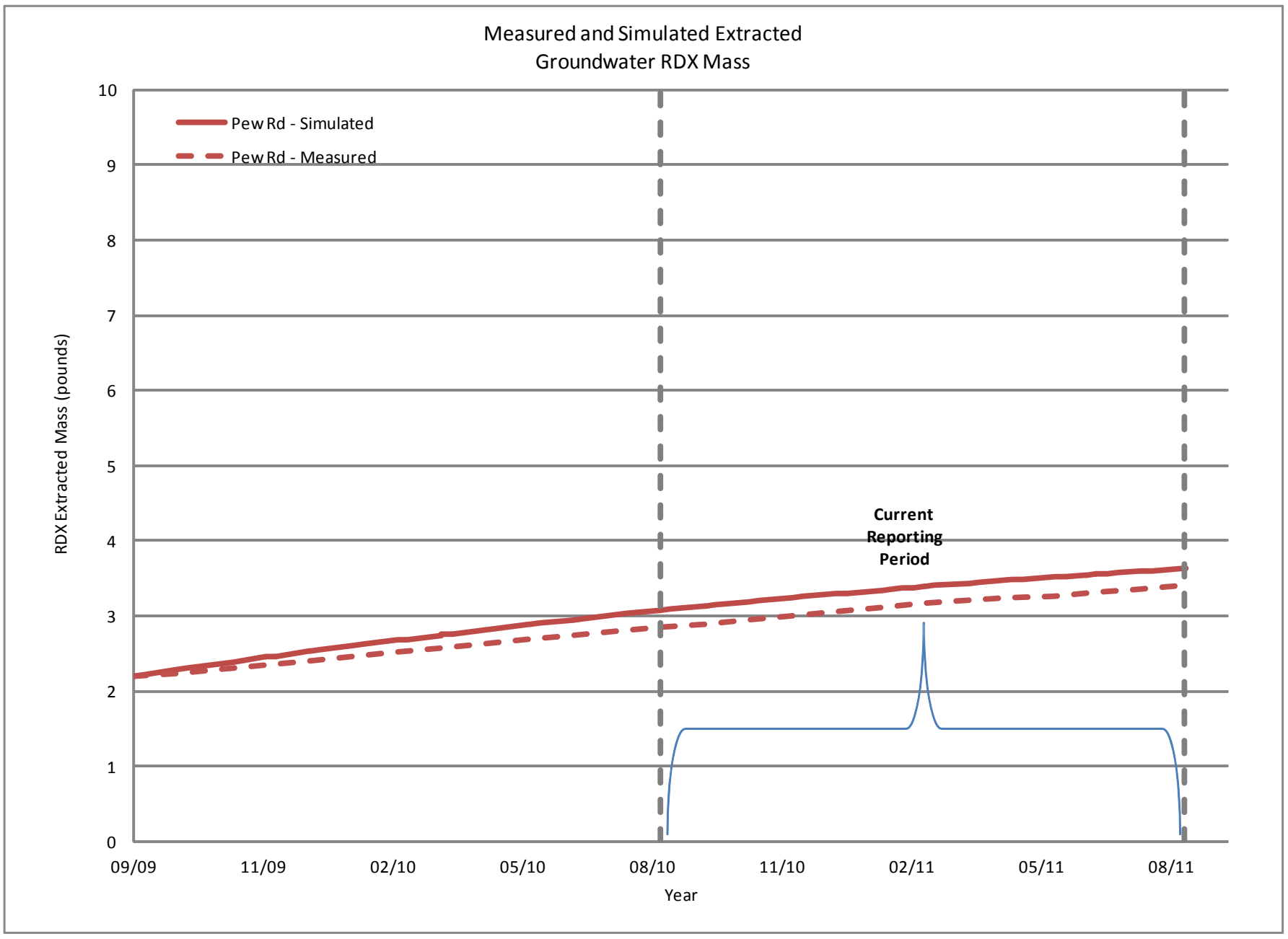
US Army Corps of Engineers
New England District

DRAFT

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January 23, 2012 DWN: MTW CHKD: MRK

FIGURE 6-4





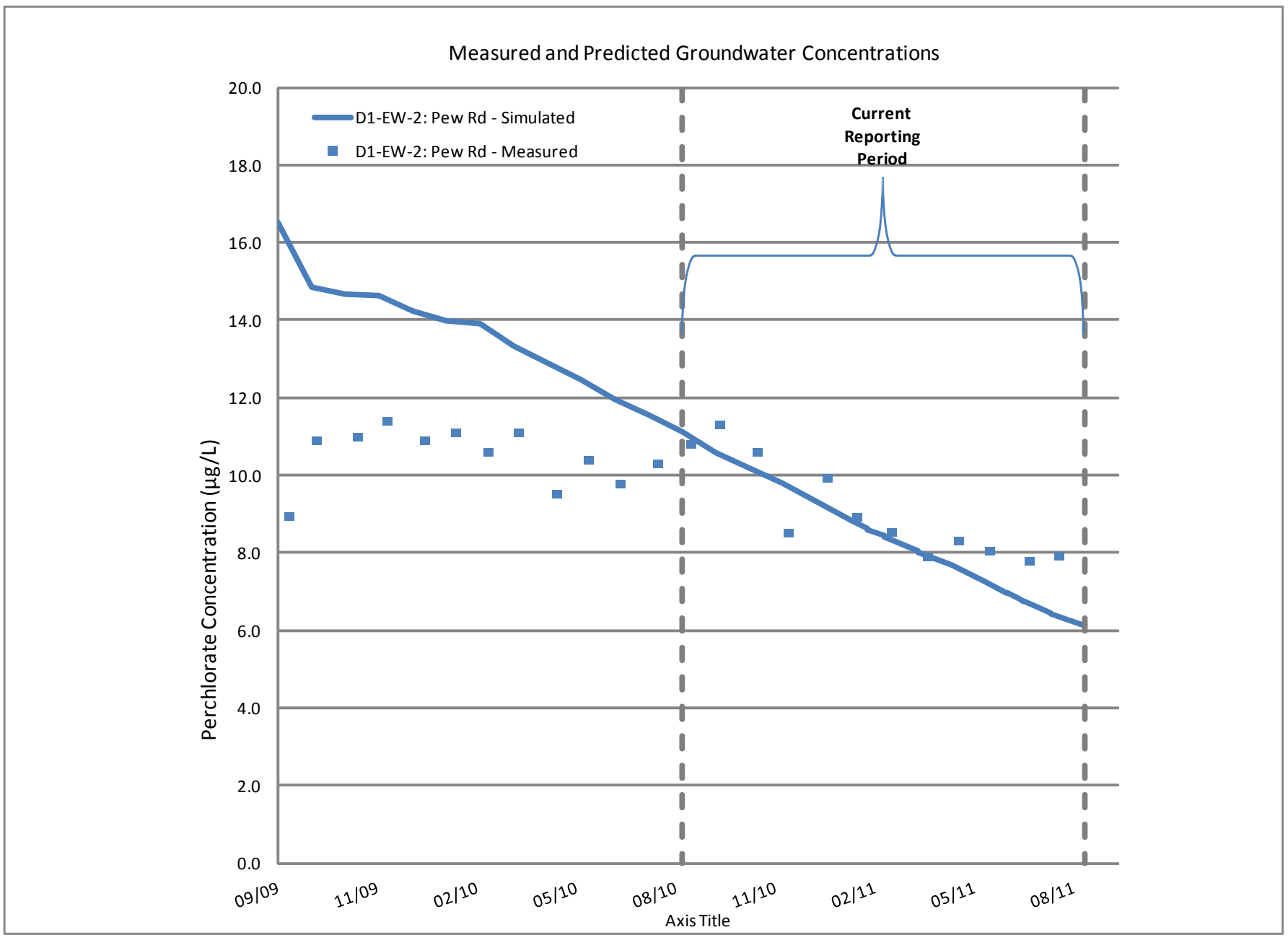
US Army Corps of Engineers
New England District

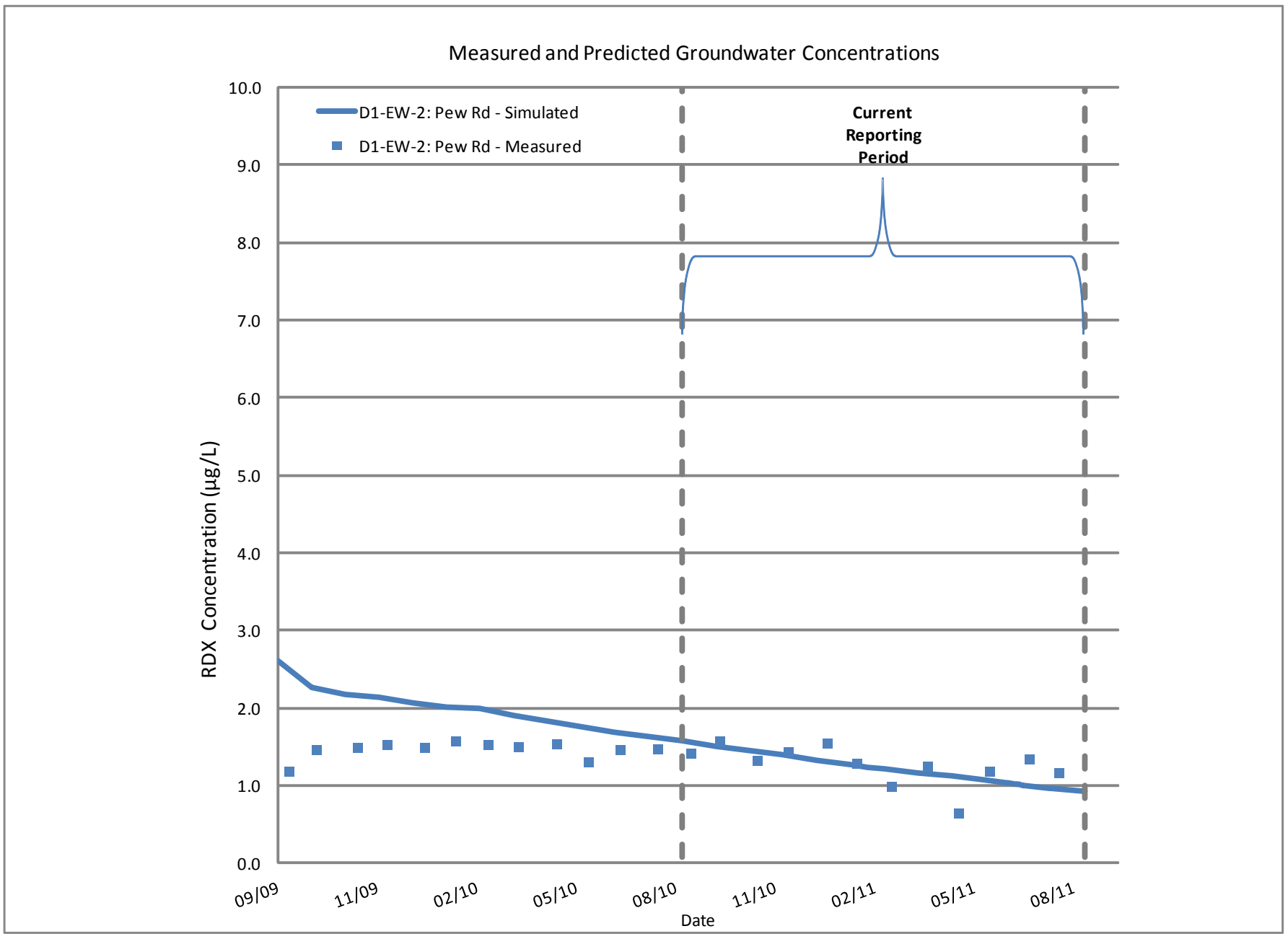
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January 23, 2012 DWN: MTW CHKD: MRK

Measured and Simulated Extracted Groundwater Mass -
Perchlorate (Top Pane) and RDX (Bottom Pane)
Pew Road System
Demo 1 Groundwater Operable Unit

FIGURE
6-5

Impact Area
Groundwater Study Program





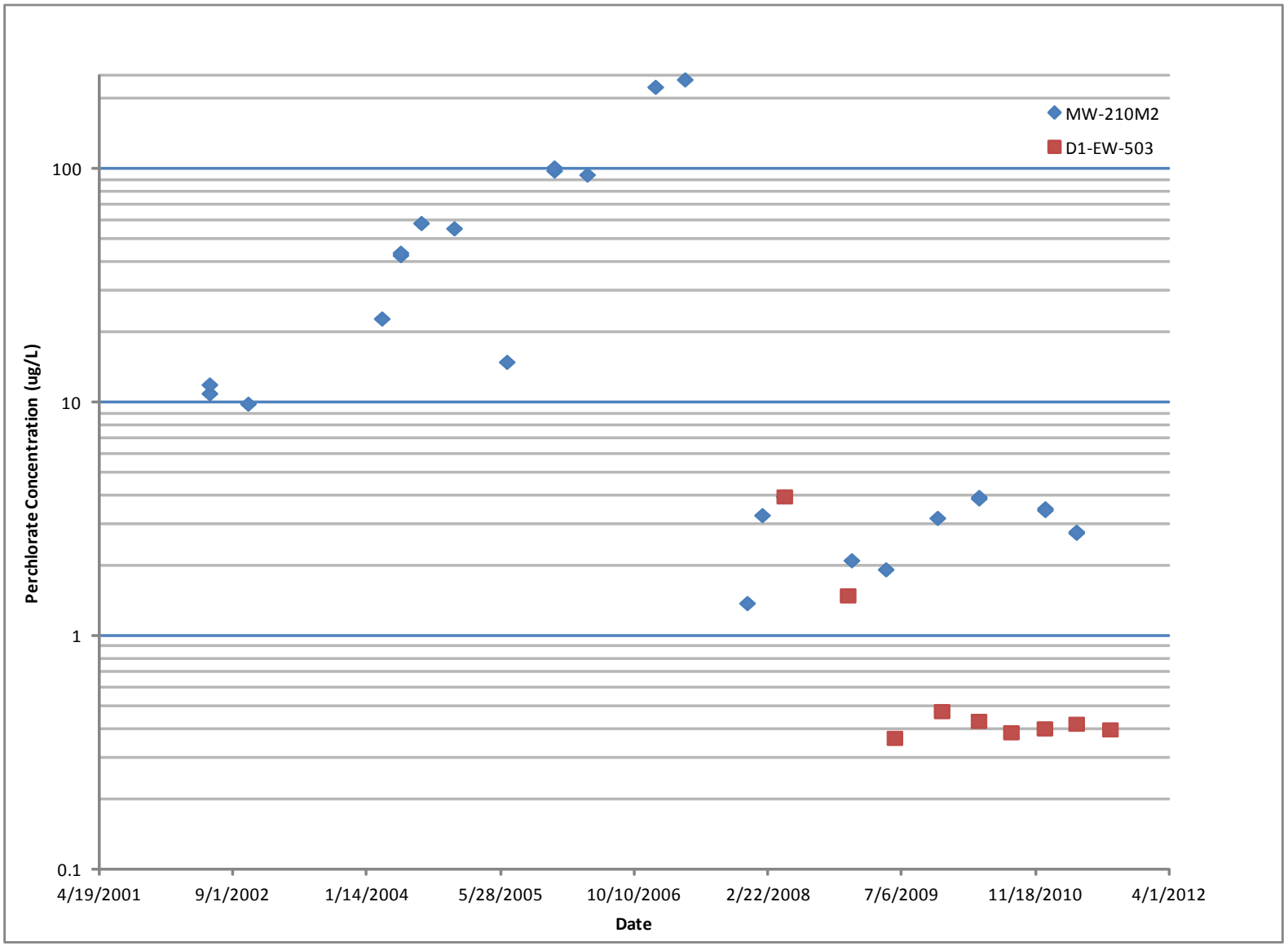
US Army Corps of Engineers
New England District

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January 23, 2012 DWN: MTW CHKD: MRK

Measured and Predicted Groundwater Concentrations - Perchlorate (Top Pane) and RDX (Bottom Pane)
Pew Road System
Demo 1 Groundwater Operable Unit

FIGURE
6-6

Impact Area Groundwater Study Program



US Army Corps of Engineers
New England District

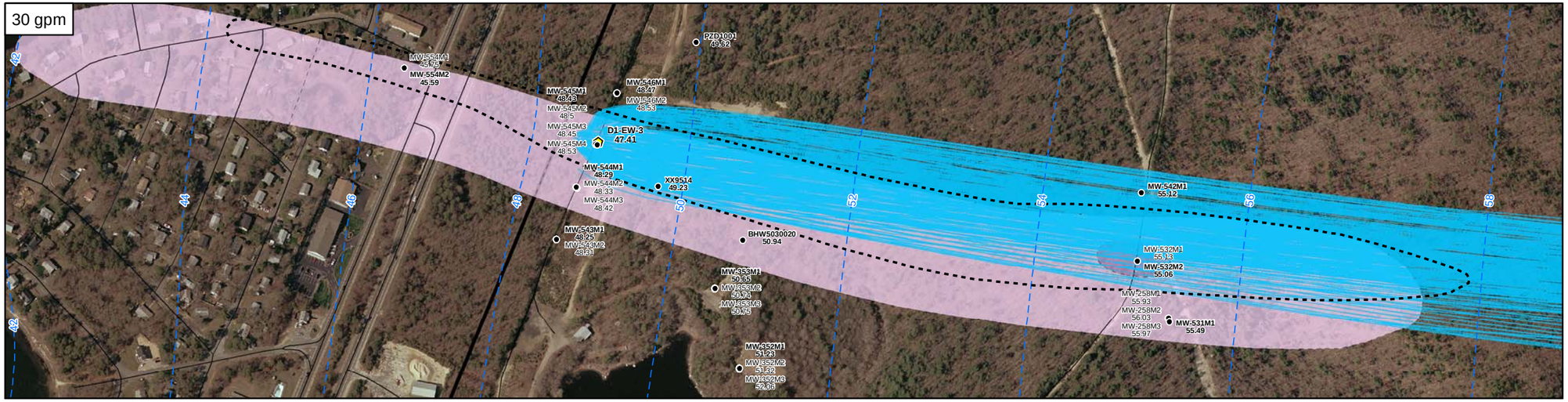
TITLE
Perchlorate Influent Concentrations at Extraction Well D1-EW-503 and Monitoring Well MW-210M2

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January 30, 2012 DWN: MTW CHKD: MRK

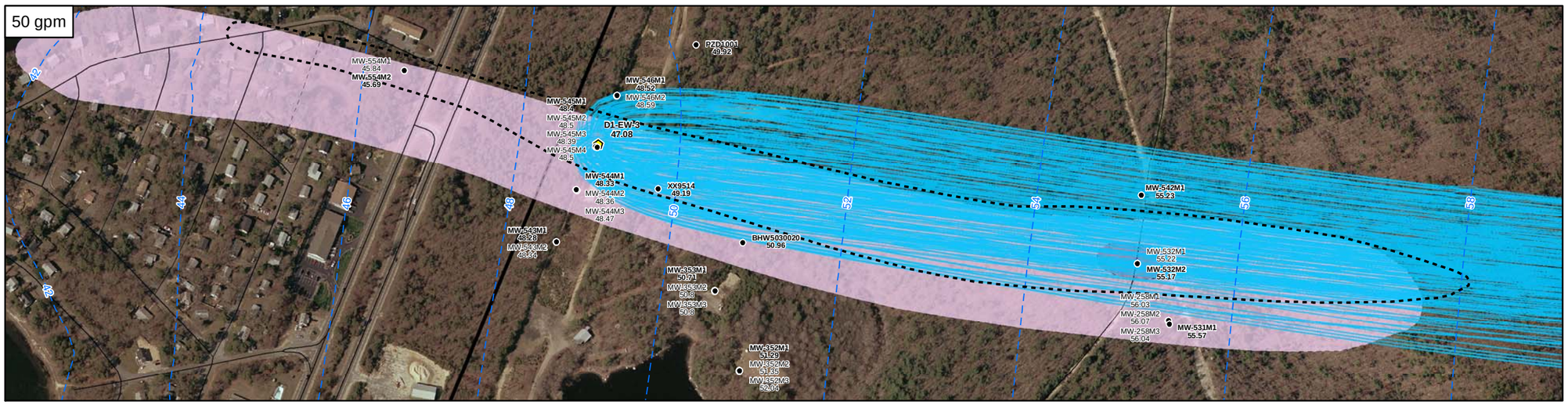
Impact Area Groundwater Study Program

FIGURE 7-1

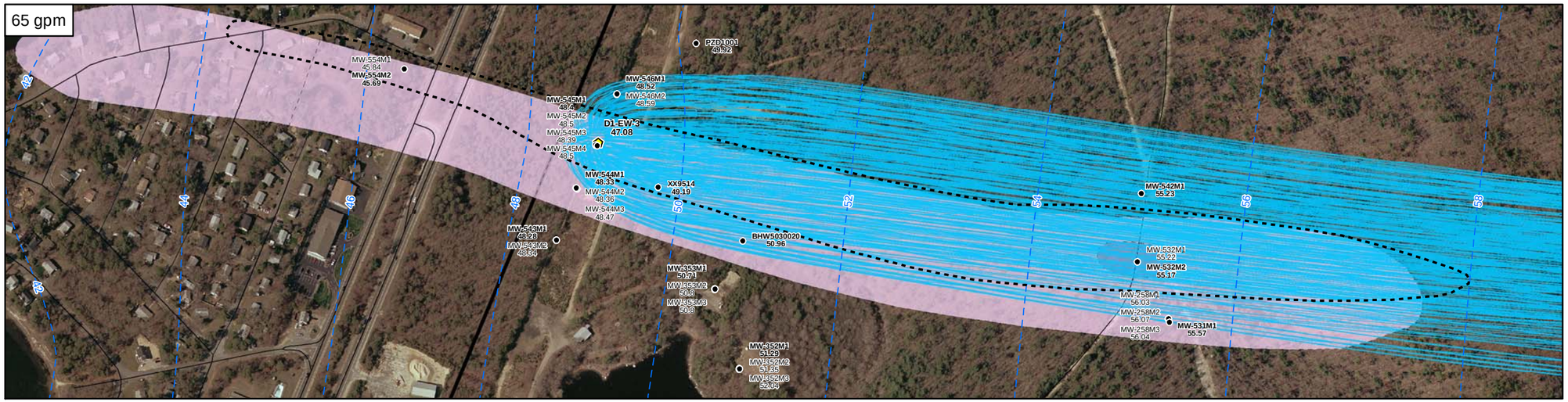
30 gpm



50 gpm



65 gpm



Impact Area Groundwater Study Program

LEGEND

- Existing Monitoring Well
- Extraction Well
- Injection Well

Perchlorate in Groundwater, data through March 2011

- > 2 ppb

Perchlorate in Groundwater, data through August 2011

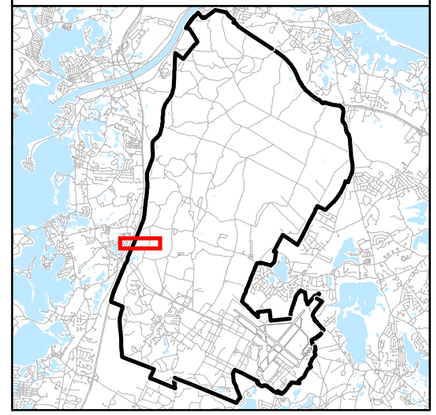
- 2 to 15 ppb
- 15 to 200 ppb

- Model-Simulated Groundwater Elevation Contours Under Pumping Conditions

Model-Simulated Streamlines defining Capture Zone

- D1-EW-3

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

Base Boundary Extraction Well - Simulated Particle Tracks at 30 gpm (Top Pane), 50 gpm (Middle Pane) and 65 gpm (Bottom Pane) Environmental and System Performance Monitoring Report Demo 1 Groundwater Operable Unit

0 250 Feet

N

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New England District

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February 8, 2012 DWN: MTW CHKD: MRK

FIGURE 7-2

Impact Area Groundwater Study Program

LEGEND

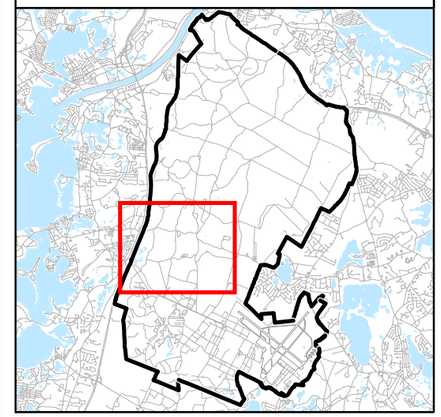
Proposed Hydraulic Monitoring Plan
- Monitoring Well - Annual
- Monitoring Well - Semi-Annual
- Extraction Well
- Injection Well

Wells not in Hydraulic Monitoring Plan
- Monitoring Well

- Perchlorate Plume > 2 ppb
- RDX Plume > 0.6 ppb
- A A' Cross Section

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through August 2011. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos:
Date Flown: 2002 Source: EarthData International

TITLE

Proposed Hydraulic Monitoring Plan
Environmental and System Performance Monitoring Report
Demo 1 Groundwater Operable Unit

0 1,000 Feet

US Army Corps of Engineers
New England District

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March 2, 2012 DWN: MTW CHKD: MRK

FIGURE 8-1

TABLES

Table 2-1
Pew Road and Frank Perkins Road Treatment Facility
Maintenance, Availability, and Downtime Summary

Month	Plant	Availability		Maintenance/Downtime for Period		
		Period	Startup-to-Date	Pump Hours	Event	Date/Action
September 2010	Pew Road MTU RA	97.4%	95.9%	18.80	Turned off system in preparation of approaching Hurricane Earl.	System shutdown at 1354 h on 3 September and was restarted at 0842 h on 4 September.
	Frank Perkins Road Treatment Facility RA	97.3%	98.0%	19.22	Turned off system in preparation of approaching Hurricane Earl.	System shutdown at 1354 h on 3 September and was restarted at 0842 h on 4 September.
October 2010	Pew Road MTU RA	99.3%	96.0%	4.77	Power line down on Connery Avenue and power shut down.	System shutdown at 0955 h on 1 October 2010 and was restarted at 1441 h on 1 October.
	Frank Perkins Road Treatment Facility RA	99.4%	98.0%	4.30	Power line down on Connery Avenue and power shut down.	System shutdown at 0955 h on 1 October 2010 and was restarted at 1413 h on 1 October.
November 2010	Pew Road MTU RA	96.4%	96.0%	4.40 23.53	1. Storm related power outage. 2. Plant turned off for a carbon exchange.	1. System shutdown 0437 h on 17 November and was restarted at 0901 h. 2. System shut down 0948 h on 18 November and restarted 0920 h on 19 November.
	Frank Perkins Road Treatment Facility RA	99.5%	98.0%	3.00	Storm related power outage.	System shutdown at 0437 h on 17 November and restarted at 0846 h.
December 2010	Pew Road MTU RA	96.5%	96.0%	17.72 7.53	1. Storm related power outage. 2. Storm related power outage.	1. System shutdown at 1630 h on 26 December and restarted at 1013 h on 27 December. 2. System shutdown at 0100 h on 20 December and was restarted at 0832 h.
	Frank Perkins Road Treatment Facility RA	94.0%	98.0%	27.72 15.85	1. Storm related power outage. 2. Storm related power outage.	1. System shutdown at 0534 h on 25 December and restarted at 0917 h on 26 December. 2. System shutdown at 1631 h on 26 December and restarted at 0822 h on 27 December.
January 2011	Pew Road MTU RA	99.8%	96.1%	1.25	System shutdown due to a power Interruption.	System shutdown at 1255 h on 06 January and restarted at 1410 h.
	Frank Perkins Road Treatment Facility RA	100.0%	98.0%	0.00	No Downtime	
February 2011	Pew Road MTU RA	99.1%	96.1%	5.88	System shutdown due to a power Interruption.	System shutdown at 0658 h on 19 February and was restarted at 1251 h.
	Frank Perkins Road Treatment Facility RA	100.0%	98.0%	0.00	No Downtime	
March 2011	Pew Road MTU RA	99.4%	96.2%	4.70	System shutdown due to a computer programming fault.	System shutdown at 1438 h on 28 March and was restarted at 1920 h.
	Frank Perkins Road Treatment Facility RA	100.0%	98.1%	0.00	No Downtime	
April 2011	Pew Road MTU RA	96.0%	96.2%	26.45 5.38	1. System shutdown for a carbon change-out. 2. System shutdown was weather related.	1. System shutdown at 0845 h on 5 April and restarted at 1112 h on 6 April. 2. System shutdown at 0256 h on 17 April and restarted at 0819 h.
	Frank Perkins Road Treatment Facility RA	100.0%	98.1%	0.00	No Downtime	
May 2011	Pew Road MTU RA	98.5%	96.3%	11.65	System shutdown due to a power interruption.	System shutdown at 2050 h on 9 May and restarted at 0829 h on 10 May.
	Frank Perkins Road Treatment Facility RA	100.0%	98.2%	0.00	No Downtime	
June 2011	Pew Road MTU RA	100.0%	96.3%	0.00	No Downtime	
	Frank Perkins Road Treatment Facility RA	100.0%	98.2%	0.00	No Downtime	

Table 2-1
Pew Road and Frank Perkins Road Treatment Facility
Maintenance, Availability, and Downtime Summary

Month	Plant	Availability		Maintenance/Downtime for Period		
		Period	Startup-to-Date	Pump Hours	Event	Date/Action
July 2011	Pew Road MTU RA	99.8%	96.4%	1.73	System shutdown due to a power supply interruption.	System shutdown at 1727 h on 18 July and was restarted at 1911 h.
	Frank Perkins Road Treatment Facility RA	99.7%	98.2%	2.03	System shutdown due to a power supply interruption.	System shutdown at 1726 h on 18 July and was restarted at 1928 h.
August 2011	Pew Road MTU RA	94.6%	96.4%	42.82	The Pew Road system was shut down in preparation for hurricane Irene.	The system was shut down at 1405 h on 27 August and restarted at 0854 h on 29 August.
	Frank Perkins Road Treatment Facility RA	94.7%	98.2%	41.82	The FPR system was shut down in preparation for hurricane Irene.	The system was shut down at 1351 h on 27 August and restarted at 0740 h on 29 August.
		Cumulative % Available		Pump Hours Down		
		Reporting Period	Since Startup			
RA Startup through 31 August 2011 Pew Road		98.0%	96.1%	116.98	Downtime During Reporting Period: Planned Shutdowns	
				59.63	Downtime During Reporting Period: Unplanned Shutdowns	
				176.62	Total Downtime Hours During Reporting Period	
				2404.3	Total Downtime hours since System Startup	
RA Startup through 31 August 2011 FPR System		98.7%	98.2%	61.03	Downtime During Reporting Period: Planned Shutdowns	
				54.05	Downtime During Reporting Period: Unplanned Shutdowns	
				115.08	Total Downtime Hours During Reporting Period	
				691.3	Total Downtime hours since RA Startup	

Table 3-1
Pew Road RA System Sampling Locations
and Parameters for Operational Monitoring
Environmental and System Performance Monitoring
Demo 1 Groundwater Operable Unit

Parameter	System Influent	Post-Lead IX	Post-Lag GAC	System Effluent (Post-Guard GAC)
Contaminants of Concern				
Perchlorate	monthly	monthly	None, until a detect at Post Lead IX	monthly
Explosives	monthly	none	monthly	monthly
Geochemistry				
Metals, Modified; Hardness	TBD	TBD	TBD	TBD
Chloride; Sulfate; Alkalinity	TBD	TBD	TBD	TBD
Ammonia; Nitrate/Nitrite; Phosphorus	TBD	TBD	TBD	TBD
Total Organic Carbon (TOC)	TBD	TBD	TBD	TBD
Total Suspended Solids (TSS)	TBD	TBD	TBD	TBD
Field Measurements				
Dissolved Oxygen	X	X	X	X
pH	X	X	X	X
Specific Conductivity	X	X	X	X
Temperature	X	X	X	X
Oxygen Reduction Potential	X	X	X	X
Turbidity	X	X	X	X

Notes:

1. X = Field measurements will be taken concurrent with all sampling events
2. TBD = To be determined in order to evaluate system operations
3. Sampling locations, parameters and frequency will be continuously evaluated and any proposed changes will be submitted for review and approval prior to implementation

Table 3-2
Frank Perkins Road RA System Sampling Locations and Parameters for Operational Monitoring
Environmental and System Performance Monitoring
Demo 1 Groundwater Operable Unit

Parameter	System Influent	Effluent IX	Mid1 GAC	Mid2 GAC	System Effluent Post Guard GAC
Contaminants of Concern					
Perchlorate	monthly	Monthly	None, until a detect at Effluent IX, then monthly	None, until detect at Mid1 GAC, then monthly	monthly
Explosives	monthly	none	monthly, until detect then none	None, until detect at Mid1 GAC, then monthly	monthly
Geochemistry					
Metals, Modified; Hardness	TBD	TBD	TBD	TBD	TBD
Chloride; Sulfate; Alkalinity	TBD	TBD	TBD	TBD	TBD
Ammonia; Nitrate/Nitrite; Phosphorus	TBD	TBD	TBD	TBD	TBD
Total Organic Carbon (TOC)	TBD	TBD	TBD	TBD	TBD
Total Suspended Solids (TSS)	TBD	TBD	TBD	TBD	TBD
Field Measurements					
Dissolved Oxygen	X	X	X	X	X
pH	X	X	X	X	X
Specific Conductivity	X	X	X	X	X
Temperature	X	X	X	X	X
Oxygen Reduction Potential	X	X	X	X	X
Turbidity	X	X	X	X	X

Notes:

1. X = Field measurements will be taken concurrent with all sampling event
2. TBD = To be determined in order to evaluate system operations
3. Sampling locations, parameters and frequency will be continuously evaluated and any proposed changes will be submitted for review and approval prior to implementation

Table 3-3
Pew Road RA Treatment Facility
Analytical Results for September 2010 through August 2011

Date	Time	Location Identifier	Sample Port	Laboratory Analyses			Field Parameters					
				Explosives		Perchlorate (µg/L)	Temp (°C)	SpC (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turb. (ntu)
				RDX (µg/L)	HMX (µg/L)							
9/10/2010	12:55	SPV-101D	PR-INF-53A	1.410	ND	10.8	11.07	41	11.53	6.13	150.6	0.00
9/10/2010	13:00	SPV-110D	PR-MID1-53A	NS	NS	ND	10.26	47	11.73	6.17	156.7	0.00
9/10/2010	13:05	SPV-115D	PR-MID2-53A	ND	ND	NS	10.45	42	11.49	6.17	162.3	0.00
9/10/2010	13:10	SPV-120D	PR-EFF-53A	ND	ND	ND	10.47	42	11.41	6.09	166.3	0.00
10/6/2010	15:05	SPV-101D	PR-INF-54A	1.560	ND	11.3	11.07	41	11.53	6.13	150.6	0.00
10/6/2010	15:10	SPV-110D	PR-MID1-54A	NS	NS	ND	10.26	47	11.73	6.17	156.7	0.00
10/6/2010	15:15	SPV-115D	PR-MID2-54A	**0.370**	ND	NS	10.45	42	11.49	6.17	162.3	0.00
10/6/2010	15:20	SPV-120D	PR-EFF-54A	ND	ND	ND	10.47	42	11.41	6.09	166.3	0.00
11/9/2010	12:05	SPV-101D	PR-INF-55A	1.310	ND	10.6	9.94	47	11.56	6.43	217.2	0.00
11/9/2010	12:10	SPV-110D	PR-MID1-55A	NS	NS	ND	9.82	52	11.63	6.35	217.1	0.00
11/9/2010	12:15	SPV-115D	PR-MID2-55A	**0.366**	ND	NS	9.80	53	11.54	6.27	218	0.00
11/9/2010	12:20	SPV-120D	PR-EFF-55A	ND	ND	ND	9.82	53	11.35	6.23	221.8	0.00
12/7/2010	14:00	SPV-101D	PR-INF-56A	1.420	ND	8.52	9.32	52	11.67	6.62	238.3	0.00
12/7/2010	14:05	SPV-110D	PR-MID1-56A	NS	NS	ND	9.71	49	11.59	6.52	226.2	0.00
12/7/2010	14:10	SPV-115D	PR-MID2-56A	ND	ND	NS	9.72	51	11.61	6.5	224.4	0.00
12/7/2010	14:15	SPV-120D	PR-EFF-56A	ND	ND	ND	9.72	51	11.46	6.45	226.1	0.00
1/11/2011	14:00	SPV-101D	PR-INF-57A	1.540	ND	9.94	9.62	49	11.88	6.32	165	0.00
1/11/2011	14:05	SPV-110D	PR-MID1-57A	NS	NS	ND	9.70	46	12.09	6.3	166.2	0.00
1/11/2011	14:10	SPV-115D	PR-MID2-57A	ND	ND	NS	9.70	53	11.59	6.22	171.4	0.00
1/11/2011	14:15	SPV-120D	PR-EFF-57A	ND	ND	ND	9.70	54	11.5	6.17	186.3	0.00
2/7/2011	14:35	SPV-101D	PR-INF-58A	1.280	ND	8.93	9.49	59	11.78	6.37	192.9	0.00
2/7/2011	14:40	SPV-110D	PR-MID1-58A	NS	NS	ND	9.74	54	11.73	6.35	188	0.00
2/7/2011	14:45	SPV-115D	PR-MID2-58A	ND	ND	NS	9.72	55	11.52	6.2	189	0.00
2/7/2011	14:50	SPV-120D	PR-EFF-58A	ND	ND	ND	9.70	56	11.41	6.02	199.3	0.00
3/10/2011	10:55	SPV-101D	PR-INF-59A	0.977	ND	8.53	9.54	47	11.32	6.12	275.6	0.00
3/10/2011	11:00	SPV-110D	PR-MID1-59A	NS	NS	ND	9.69	47	11.25	6.13	278	0.00
3/10/2011	11:05	SPV-115D	PR-MID2-59A	**0.257**	ND	NS	9.69	47	11.11	6.1	282.6	0.00
3/10/2011	11:10	SPV-120D	PR-EFF-59A	ND	ND	ND	9.72	47	10.89	6.04	297.6	0.00
4/12/2011	13:05	SPV-101D	PR-INF-60A	1.240	ND	7.91	10.33	60	14.02	6.34	186.1	0.00
4/12/2011	13:10	SPV-110D	PR-MID1-60A	NS	NS	ND	9.92	60	14.37	6.23	189.8	0.00
4/12/2011	13:15	SPV-115D	PR-MID2-60A	ND	ND	NS	9.97	60	14.07	6.14	195.4	0.00
4/12/2011	13:20	SPV-120D	PR-EFF-60A	ND	ND	ND	9.98	60	13.75	6.02	202.2	0.00
5/10/2011	15:30	SPV-101D	PR-INF-61A	0.634	ND	8.32	9.99	64	11.51	6.09	187.2	0.00
5/10/2011	15:35	SPV-110D	PR-MID1-61A	NS	NS	ND	9.89	63	11.6	6.19	186.9	0.00
5/10/2011	15:40	SPV-115D	PR-MID2-61A	ND	ND	NS	9.92	64	11.37	6.08	194.3	0.00
5/10/2011	15:45	SPV-120D	PR-EFF-61A	ND	ND	ND	9.94	64	11.04	5.93	205.3	0.00
6/7/2011	12:55	SPV-101D	PR-INF-62A	1.170	ND	8.06	10.82	62	10.83	6.01	166.9	0.00
6/7/2011	13:00	SPV-110D	PR-MID1-62A	NS	NS	ND	10.11	61	11.12	6.03	168.9	0.00
6/7/2011	13:05	SPV-115D	PR-MID2-62A	ND	ND	NS	10.18	61	10.85	6.01	171	0.00
6/7/2011	13:10	SPV-120D	PR-EFF-62A	ND	ND	ND	10.23	61	10.68	5.95	176.2	0.00
7/13/2011	13:00	SPV-101D	PR-INF-63A	1.330	ND	7.8	10.78	65	10.89	6.14	162.8	0.00
7/13/2011	13:05	SPV-110D	PR-MID1-63A	NS	NS	ND	10.12	65	10.99	6.13	165	0.00
7/13/2011	13:10	SPV-115D	PR-MID2-63A	ND	ND	NS	10.20	65	10.79	5.97	171.1	0.00
7/13/2011	13:15	SPV-120D	PR-EFF-63A	ND	ND	ND	10.25	65	10.63	5.92	176.9	0.00
8/9/2011	14:15	SPV-101D	PR-INF-64A	1.150	ND	7.92	10.71	64	11.12	6.35	143.5	0.00
8/9/2011	14:20	SPV-110D	PR-MID1-64A	NS	NS	ND	10.05	65	11.21	6.29	147.8	0.00
8/9/2011	14:25	SPV-115D	PR-MID2-64A	ND	ND	NS	10.12	65	10.96	6.2	153.7	0.00
8/9/2011	14:30	SPV-120D	PR-EFF-64A	ND	ND	ND	10.20	65	10.79	6.12	160.3	0.00

LEGEND

RDX = Hexa Hexahydro-1,3,5-Trinitro-1,3,5-Triazine
HMX = Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine
Perchlorate = ionic concentration

NS = not sampled
ND = RDX and HMX not detected above 0.20 µg/L, and Perchlorate not detected above 0.35 ug/L
J = estimated value
Breakthrough Detected

Temp = temperature
SpC = specific conductivity
DO = dissolved oxygen
ORP = oxidation reduction potential
Turb = turbidity
pH = pH

°C = degrees Celsius
µS/cm = microsiemens per centimeter
mg/L = milligrams per liter (parts per million)
mV = millivolts
ntu = nephelometric turbidity units

Where duplicate sample results were available, the result presented is the average of the original and duplicate samples.

Table 3-4
Frank Perkins Road Treatment Facility RA
Analytical Results for September 2010 through August 2011

Sample Date	Sample Time	Location Identifier	Laboratory Analyses			Field Parameters					
			Explosives		Perchlorate (µg/L)	Temp (°C)	SpC (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turb. (ntu)
			RDX (µg/L)	HMX (µg/L)							
9/10/2010	13:30	FPR2-INF-53A	ND	0.889	1.230	10.46	42	11.62	6.15	115	0.00
9/10/2010	13:35	FPR2-POST-IX-A-53A	NS	NS	ND	10.26	43	11.48	6.26	105.1	0.00
9/10/2010	13:40	FPR2-POST-IX-B-53A	NS	NS	ND	10.27	45	11.52	6.27	105.9	0.00
9/10/2010	13:45	FPR2-GAC-MID1-A-53A	ND	ND	NS	10.21	46	11.36	6.10	115.1	0.00
9/10/2010	13:50	FPR2-GAC-MID1-B-53A	ND	ND	NS	10.26	45	11.34	6.11	117.5	0.00
9/10/2010	13:55	FPR2-EFF-B-53A	COMPOSITE	COMPOSITE	COMPOSITE	10.27	45	11.04	6.10	114.8	0.00
9/10/2010	14:00	FPR2-EFF-A-53A	COMPOSITE	COMPOSITE	COMPOSITE	10.26	45	11.10	6.09	116.3	0.00
9/10/2010	Composite	FPR2-EFF-53A	ND	ND	ND	-	-	-	-	-	-
10/6/2010	15:40	FPR2-INF-54A	1.220	0.483	0.751	10.05	41	11.69	6.26	139.1	0.00
10/6/2010	15:45	FPR2-POST-IX-A-54A	NS	NS	ND	10.16	42	11.45	6.28	126.7	0.00
10/6/2010	15:50	FPR2-POST-IX-B-54A	NS	NS	ND	10.17	42	11.51	6.29	122.1	0.00
10/6/2010	15:55	FPR2-GAC-MID1-A-54A	ND	ND	NS	10.12	42	11.40	6.28	125.2	0.00
10/6/2010	16:00	FPR2-GAC-MID1-B-54A	ND	ND	NS	10.15	42	10.93	6.18	130.9	0.00
10/6/2010	16:05	FPR2-EFF-B-54A	COMPOSITE	COMPOSITE	COMPOSITE	10.16	42	10.42	5.99	122.4	0.00
10/6/2010	16:10	FPR2-EFF-A-54A	COMPOSITE	COMPOSITE	COMPOSITE	10.15	42	10.41	5.96	121	0.00
10/6/2010	Composite	FPR2-EFF-54A	ND	ND	ND	-	-	-	-	-	-
11/9/2010	14:00	FPR2-INF-55A	1.290	0.292	1.020	9.83	50	11.94	6.14	174	0.00
11/9/2010	14:05	FPR2-POST-IX-A-55A	NS	NS	ND	9.84	51	11.63	6.23	156.5	0.00
11/9/2010	14:10	FPR2-POST-IX-B-55A	NS	NS	ND	9.87	51	11.58	6.25	152.3	0.00
11/9/2010	14:15	FPR2-GAC-MID1-A-55A	ND	ND	NS	9.84	53	11.62	6.27	144	0.00
11/9/2010	14:20	FPR2-GAC-MID1-B-55A	ND	ND	NS	9.83	52	11.62	6.21	144.2	0.00
11/9/2010	14:25	FPR2-EFF-B-55A	COMPOSITE	COMPOSITE	COMPOSITE	9.84	53	11.46	6.21	145.1	0.00
11/9/2010	14:30	FPR2-EFF-A-55A	COMPOSITE	COMPOSITE	COMPOSITE	9.84	54	10.99	6.20	136.6	0.00
11/9/2010	Composite	FPR2-EFF-55A	ND	ND	ND	-	-	-	-	-	-
12/7/2010	15:05	FPR2-INF-56A	0.866	ND	1.040	9.17	49	11.97	6.58	216	0.00
12/7/2010	15:10	FPR2-POST-IX-A-56A	NS	NS	ND	9.46	49	11.62	6.60	179.1	0.00
12/7/2010	15:15	FPR2-POST-IX-B-56A	NS	NS	ND	9.52	50	11.60	6.64	170.9	0.00
12/7/2010	15:20	FPR2-GAC-MID1-A-56A	ND	ND	NS	9.51	51	11.36	6.43	156.1	0.00
12/7/2010	15:25	FPR2-GAC-MID1-B-56A	ND	ND	NS	9.51	50	11.56	6.42	171.3	0.00
12/7/2010	15:30	FPR2-EFF-B-56A	COMPOSITE	COMPOSITE	COMPOSITE	9.57	52	10.52	6.25	144.4	0.00
12/7/2010	15:35	FPR2-EFF-A-56A	COMPOSITE	COMPOSITE	COMPOSITE	9.56	52	10.48	6.26	141.7	0.00
12/7/2010	Composite	FPR2-EFF-56A	ND	ND	ND	-	-	-	-	-	-
1/11/2011	13:00	FPR2-INF-57A	1.330	0.518	0.686	9.18	47	11.70	6.24	170.6	0.00
1/11/2011	13:05	FPR2-POST-IX-A-57A	NS	NS	ND	9.18	53	11.62	6.41	139.9	0.00
1/11/2011	13:10	FPR2-POST-IX-B-57A	NS	NS	ND	9.36	53	11.62	6.41	139.3	0.00
1/11/2011	13:15	FPR2-GAC-MID1-A-57A	ND	ND	NS	9.34	59	11.37	6.27	144.7	0.00
1/11/2011	13:20	FPR2-GAC-MID1-B-57A	ND	ND	NS	9.42	52	11.16	6.24	149.7	0.00
1/11/2011	13:25	FPR2-EFF-B-57A	COMPOSITE	COMPOSITE	COMPOSITE	9.36	54	10.50	6.11	144.4	0.00
1/11/2011	13:30	FPR2-EFF-A-57A	COMPOSITE	COMPOSITE	COMPOSITE	9.36	54	10.51	6.10	144.2	0.00
1/11/2011	Composite	FPR2-EFF-57A	ND	ND	ND	-	-	-	-	-	-

Table 3-4
Frank Perkins Road Treatment Facility RA
Analytical Results for September 2010 through August 2011

Sample Date	Sample Time	Location Identifier	Laboratory Analyses			Field Parameters					
			Explosives		Perchlorate (µg/L)	Temp (°C)	SpC (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turb. (ntu)
			RDX (µg/L)	HMX (µg/L)							
2/7/2011	12:55	FPR2-INF-58A	1.490	0.418	0.844	9.16	48	12.18	6.17	148.4	0.00
2/7/2011	13:00	FPR2-POST-IX-A-58A	NS	NS	ND	9.43	49	11.84	6.34	136.4	0.00
2/7/2011	13:05	FPR2-POST-IX-B-58A	NS	NS	ND	9.42	50	11.89	6.38	134.1	0.00
2/7/2011	13:10	FPR2-GAC-MID1-A-58A	0.311	ND	NS	9.50	55	11.70	6.22	140	0.00
2/7/2011	13:15	FPR2-GAC-MID1-B-58A	ND	ND	NS	9.49	50	11.25	6.12	143.4	0.00
2/7/2011	13:20	FPR2-EFF-B-58A	COMPOSITE	COMPOSITE	COMPOSITE	9.49	52	10.88	6.11	143.3	0.00
2/7/2011	13:25	FPR2-EFF-A-58A	COMPOSITE	COMPOSITE	COMPOSITE	9.49	48	10.85	6.11	143.8	0.00
2/7/2011	Composite	FPR2-EFF-58A	ND	ND	ND	-	-	-	-	-	-
3/10/2011	12:55	FPR2-INF-59A	0.849	0.355	0.791	9.26	54	11.55	6.40	195.8	0.00
3/10/2011	13:00	FPR2-POST-IX-A-59A	NS	NS	ND	9.40	43	11.37	6.33	165.6	0.00
3/10/2011	13:05	FPR2-POST-IX-B-59A	NS	NS	ND	9.40	43	11.36	6.30	141.8	0.00
3/10/2011	13:10	FPR2-GAC-MID1-A-59A	NS	NS	NS	9.51	45	11.49	6.07	145.5	0.00
3/10/2011	13:10	FPR2-GAC-MID2-A-59A	ND	ND	NS	NA	NA	NA	NA	NA	NA
3/10/2011	13:15	FPR2-GAC-MID1-B-59A	ND	ND	NS	9.42	44	10.66	6.00	140.8	0.00
3/10/2011	13:20	FPR2-EFF-B-59A	COMPOSITE	COMPOSITE	COMPOSITE	9.52	44	11.04	5.91	164.3	0.00
3/10/2011	13:25	FPR2-EFF-A-59A	COMPOSITE	COMPOSITE	COMPOSITE	9.51	44	11.03	5.92	164.2	0.00
3/10/2011	Composite	FPR2-EFF-59A	ND	ND	ND	-	-	-	-	-	-
4/12/2011	13:30	FPR2-INF-60A	1.050	0.422	0.776	9.70	57	14.49	6.08	132.4	0.00
4/12/2011	13:35	FPR2-POST-IX-A-60A	NS	NS	ND	9.79	57	14.35	6.22	107.9	0.00
4/12/2011	13:40	FPR2-POST-IX-B-60A	NS	NS	ND	9.79	57	14.46	6.24	101.3	0.00
4/12/2011	13:45	FPR2-GAC-MID1-A-60A	NS	ND	NS	9.79	57	13.99	6.11	114.7	0.00
4/12/2011	13:50	FPR2-GAC-MID2-A-60A	ND	ND	NS	9.81	57	13.38	6.02	118.5	
4/12/2011	13:55	FPR2-GAC-MID1-B-60A	ND	ND	NS	9.81	57	13.61	6.03	120.5	0.00
4/12/2011	14:00	FPR2-EFF-B-60A	COMPOSITE	COMPOSITE	COMPOSITE	9.81	57	12.35	5.91	125.6	0.00
4/12/2011	14:05	FPR2-EFF-A-60A	COMPOSITE	COMPOSITE	COMPOSITE	9.83	57	12.38	5.96	139.4	0.00
4/12/2011	Composite	FPR2-EFF-60A	ND	ND	ND	-	-	-	-	-	-
5/10/2011	14:40	FPR2-INF-61A	0.561	ND	0.764	9.83	62	11.95	6.16	158.6	0.00
5/10/2011	14:45	FPR2-POST-IX-A-61A	NS	NS	ND	10.02	62	11.50	6.23	127.3	0.00
5/10/2011	14:50	FPR2-POST-IX-B-61A	NS	NS	ND	10.00	62	11.67	6.25	123.2	0.00
5/10/2011	14:55	FPR2-GAC-MID2-A-61A	ND	ND	NS	10.00	62	10.88	6.03	132.6	0.00
5/10/2011	15:00	FPR2-GAC-MID1-B-61A	ND	ND	NS	9.99	62	11.05	6.03	132.5	0.00
5/10/2011	15:05	FPR2-EFF-B-61A	COMPOSITE	COMPOSITE	COMPOSITE	9.98	62	10.66	5.95	128.8	0.00
5/10/2011	15:10	FPR2-EFF-A-61A	COMPOSITE	COMPOSITE	COMPOSITE	9.98	62	10.29	5.92	125	0.00
5/10/2011	Composite	FPR2-EFF-61A	ND	ND	ND	-	-	-	-	-	-
6/7/2011	13:55	FPR2-INF-62A	0.905	0.325	0.720	10.39	61	11.40	6.20	126.7	0.00
6/7/2011	14:00	FPR2-POST-IX-A-62A	NS	NS	ND	10.45	60	10.98	6.20	104.4	0.00
6/7/2011	14:05	FPR2-POST-IX-B-62A	NS	NS	ND	10.40	60	11.02	6.22	104.5	0.00
6/7/2011	14:10	FPR2-GAC-MID2-A-62A	ND	ND	NS	10.47	60	10.33	5.96	111.7	0.00
6/7/2011	14:15	FPR2-GAC-MID1-B-62A	ND	ND	NS	10.39	60	10.39	5.98	113.7	0.00
6/7/2011	14:20	FPR2-EFF-B-62A	COMPOSITE	COMPOSITE	COMPOSITE	10.39	60	10.18	5.94	118.2	0.00
6/7/2011	14:25	FPR2-EFF-A-62A	COMPOSITE	COMPOSITE	COMPOSITE	10.38	60	10.10	5.91	117.1	0.00
6/7/2011	Composite	FPR2-EFF-62A	ND	ND	ND	-	-	-	-	-	-

Table 3-4
Frank Perkins Road Treatment Facility RA
Analytical Results for September 2010 through August 2011

Sample Date	Sample Time	Location Identifier	Laboratory Analyses			Field Parameters					
			Explosives		Perchlorate (µg/L)	Temp (°C)	SpC (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turb. (ntu)
			RDX (µg/L)	HMX (µg/L)							
7/13/2011	13:55	FPR2-INF-63A	0.810	0.410	0.662	10.49	66	11.10	6.15	130.2	0.00
7/13/2011	14:00	FPR2-POST-IX-A-63A	NS	NS	ND	10.57	65	10.84	6.22	106.5	0.00
7/13/2011	14:05	FPR2-POST-IX-B-63A	NS	NS	ND	10.56	65	10.85	6.22	97.9	0.00
7/13/2011	14:10	FPR2-GAC-MID2-A-63A	ND	ND	NS	10.62	65	10.25	6.03	102.6	0.00
7/13/2011	14:15	FPR2-GAC-MID1-B-63A	ND	ND	NS	10.53	65	10.31	5.98	104.5	0.00
7/13/2011	14:20	FPR2-EFF-B-63A	COMPOSITE	COMPOSITE	COMPOSITE	10.67	65	9.29	5.84	109.4	0.00
7/13/2011	14:25	FPR2-EFF-A-63A	COMPOSITE	COMPOSITE	COMPOSITE	10.66	65	9.29	5.83	109.5	0.00
7/13/2011	Composite	FPR2-EFF-63A	ND	ND	ND	-	-	-	-	-	-
8/9/2011	15:00	FPR2-INF-64A	0.928	0.454	0.659	10.37	66	11.22	6.05	131.1	0.00
8/9/2011	15:05	FPR2-POST-IX-A-64A	NS	NS	ND	10.40	65	11.00	6.16	117.5	0.00
8/9/2011	15:10	FPR2-POST-IX-B-64A	NS	NS	ND	10.47	65	10.93	6.18	101.6	0.00
8/9/2011	15:15	FPR2-GAC-MID2-A-64A	ND	ND	NS	10.44	65	10.27	5.98	104.1	0.00
8/9/2011	15:20	FPR2-GAC-MID1-B-64A	ND	ND	NS	10.43	65	10.36	5.96	103.6	0.00
8/9/2011	15:25	FPR2-EFF-B-64A	COMPOSITE	COMPOSITE	COMPOSITE	10.46	65	9.99	5.89	102.2	0.00
8/9/2011	15:30	FPR2-EFF-A-64A	COMPOSITE	COMPOSITE	COMPOSITE	10.47	65	10.02	5.88	103.5	0.00
8/9/2011	Composite	FPR2-EFF-64A	ND	ND	ND	-	-	-	-	-	-

LEGEND

RDX = Hexahydro-1,3,5-Trinitro-1,3,5-Triazine
HMX = Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine
Perchlorate = ionic concentration

NS = not sampled
ND = RDX and HMX not detected above 0.20 µg/L;Perchlorate not detected above 0.35 ug/L
J = estimated value
Breakthrough Detected
Composited Samples

Temp = temperature
SpC = specific conductivity
DO = dissolved oxygen
ORP = oxidation reduction potential
Turb = turbidity
pH = pH

°C = degrees Celsius
µS/cm = microsiemens per centimeter
mg/L = milligrams per liter (parts per million)
mV = millivolts
ntu = nephelometric turbidity units

FPR2-INF	Influent
FPR2-IX-EFF-A	IX-1A (effluent)
FPR2-IX-EFF-B	IX-1B(effluent)
FPR2-GAC-MID1-A	GAC-1A (mid)
FPR2-GAC-MID1-B	GAC-1B(mid)
FPR2-EFF	System Effluent

Where duplicate sample results were available, the result presented is the average of the original and duplicate samples.

Table 3-5
Base Boundary Treatment System
Analytical Results for
June 2011 through August 2011

Sample Date	Location Identifier	Laboratory Analyses			Field Parameters					
		Explosives		Perchlorate (µg/L)	Temp (°C)	SpC (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turb. (ntu)
		RDX (µg/L)	HMX (µg/L)							
6/22/2011	D1-INF-02	0.46	ND	5.70	-	-	-	-	-	-
6/22/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
6/22/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
6/22/2011	D1-EFF-02	ND	ND	ND	12.04	0	6.24	6.30	160.7	0.00
6/23/2011	D1-INF-02	0.41	ND	4.90	-	-	-	-	-	-
6/23/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
6/23/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
6/23/2011	D1-EFF-02	ND	ND	ND	10.95	0	9.70	7.90	170.2	0.00
6/24/2011	D1-INF-02	0.36	ND	4.60	-	-	-	-	-	-
6/24/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
6/24/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
6/24/2011	D1-EFF-02	ND	ND	ND	10.75	0	10.55	7.98	186.2	0.00
6/25/2011	D1-INF-02	0.32	ND	3.90	-	-	-	-	-	-
6/25/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
6/25/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
6/25/2011	D1-EFF-02	ND	ND	ND	10.66	0	10.47	7.43	170.1	0.00
6/26/2011	D1-INF-02	0.29	ND	3.70	-	-	-	-	-	-
6/26/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
6/26/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
6/26/2011	D1-EFF-02	ND	ND	ND	10.46	0	9.64	8.91	56.6	0.05
6/28/2011	D1-INF-02	0.26	ND	3.40	10.76	0	10.48	7.90	113.4	0.67
6/28/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
6/28/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
6/28/2011	D1-EFF-02	ND	ND	ND	11.12	0	9.50	7.65	115.3	0.13
7/6/2011	D1-INF-02	ND	ND	3.20	10.96	0	11.22	-	161.3	0.24
7/6/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
7/6/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
7/6/2011	D1-EFF-02	ND	ND	ND	11.60	0	10.71	-	157.5	0.00
7/13/2011	D1-INF-02	ND	ND	3.00	10.77	0	11.25	7.61	93.4	2.14
7/13/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
7/13/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
7/13/2011	D1-EFF-02	ND	ND	ND	11.98	0	10.50	8.45	65.9	0.00

Table 3-5
Base Boundary Treatment System
Analytical Results for
June 2011 through August 2011

Sample Date	Location Identifier	Laboratory Analyses			Field Parameters					
		Explosives		Perchlorate (µg/L)	Temp (°C)	SpC (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turb. (ntu)
		RDX (µg/L)	HMX (µg/L)							
7/20/2011	D1-INF-02	ND	ND	3.20	10.76	0	11.52	7.36	165.7	3.65
7/20/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
7/20/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
7/20/2011	D1-EFF-02	ND	ND	ND	11.58	0	10.73	7.52	168.8	0.35
8/17/2011	D1-INF-02	ND	ND	2.47	12.45	0	11.09	6.95	114.7	0.38
8/17/2011	D1-MID1-02	NS	NS	ND	-	-	-	-	-	-
8/17/2011	D1-MID2-02	ND	ND	NS	-	-	-	-	-	-
8/17/2011	D1-EFF-02	ND	ND	ND	12.71	0	10.53	7.49	110.3	0.24

LEGEND
RDX = Hexahydro-1,3,5-Trinitro-1,3,5-Triazine
HMX = Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine
Perchlorate = ionic concentration

NS = not sampled
ND = RDX and HMX not detected above 0.20 µg/L;Perchlorate not detected above 0.35 ug/L
J = estimated value
Breakthrough Detected

Temp = temperature
SpC = specific conductivity
DO = dissolved oxygen
ORP = oxidation reduction potential
Turb = turbidity
pH = pH

°C = degrees Celsius
µS/cm = microsiemens per centimeter
mg/L = milligrams per liter (parts per million)
mV = millivolts
ntu = nephelometric turbidity units

Where duplicate sample results were available, the result presented is the average of the original and duplicate samples.

Table 3-6
Base Boundary Treatment System
Inorganic Analytical Results

Sample Date	Location Identifier	Laboratory Analyses																			Field Parameters					
		Metals											Chloride (mg/L)	Sulfate (mg/L)	Alkalinity		NH3 (mg/L)	Phos. (mg/L)	NO3 / NO2 (mg/L)	TOC (mg/L)	TSS (mg/L)	Temp (°C)	SpC (µS/cm)	DO (mg/L)	pH	ORP (mV)	Turb. (ntu)
		As (µg/L)	Ca (µg/L)	Mg (µg/L)	Mn (µg/L)	Na (µg/L)	Hg (µg/L)	Cr (µg/L)	Zn (µg/L)	Cu (µg/L)	Sb (µg/L)	Al (µg/L)			Bicarb. (mg/L)	Total (mg/L)										
6/28/2011	D1-INF-02	10 U	2500 J	1300 J	7.2 J	7100	0.12 J	10 U	45	25 U	60 U	58 J	9.4	4.9 J	-	6.0	0.17	23 J	0.053	0.38 J	0.52	10.76	0	10.48	7.90	113.4	0.67
6/28/2011	D1-MID1-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/28/2011	D1-MID2-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/28/2011	D1-EFF-02	10 U	2500 J	1200 J	7.4 J	7300	0.20 U	10 U	37	25 U	60 U	200 U	14	5.0 U	-	6.6	0.15	250 U	0.05 U	0.24 J	-	11.12	0	9.50	7.65	115.3	0.13

Legend:

Metals
- As = Arsenic
- Ca = Calcium
- Mg = Magnesium
- Mn = Manganese
- Na = Sodium
- Hg = Mercury
- Cr = Chromium
- Zn = Zinc
- Cu = Copper
- Sb = Antimony
- Al = Aluminum

Alkalinity
- Bicarbonate (as CaCO3)
- Total (as CaCO3)

NH3 = Ammonia (as N)
Phos. = Phosphorous, total (as P)
NO3 / NO2 = Nitrate / Nitrite (as N)
TOC = total organic carbon
TSS = total suspended solids
Temp = temperature
SpC = specific conductivity
DO = dissolved oxygen
pH = pH
ORP = oxidation reduction potential
Turb = turbidity
Color. = Colormetric
Hardness
Chloride (as Cl)
Sulfate (as SO4)

µg/L = micrograms per liter (parts per billion)
C = degrees Celsius
µS/cm = microsieme- per centimeter
mg/L = milligrams per liter (parts per million)
mV = millivolts
ntu = nephelometric turbidity units
NA = not available
- = not sampled
NS = not sampled
ND = RDX and HMX not detected above 0.25 µg/L, and Perchlorate not detected above 0.35 ug/L
J = estimated value

Where duplicate sample results were available, the result presented is the average of the original and duplicate samples.

Table 4-1
Wells in Hydraulic Monitoring Plan

Annual Environmental and System Performance Monitoring Plan
Demo 1 Groundwater Operable Unit

Well ID	Screen ID	Ground Elevation (ft bgs)	Top PVC or Steel Casing Elevation (ft NGVD)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Top of Screen Elevation (ft NGVD)	Bottom of Screen Elevation (ft NGVD)	Midscreen Elevation (ft NGVD)
Frank Perkins Road System								
D1-EW-1	NA	145	145.10	109	199	36.0	-54.0	-9.0
D1-EW-501	NA	148	147.15	88	188	60.0	-40.0	10.0
D1-EW-502	NA	138	149.92	88	188	50.0	-50.0	0.0
D1-EW-503	NA	178	175.22	148	228	30.0	-50.0	-10.0
D1-IW-1	NA	166	164.39	220	320	-54.0	-154.0	-104.0
D1-IW-5	NA	155	153.80	110	195	45.0	-40.0	2.5
MW-46	D	226	225.56	295	305	-69.0	-79.0	-74.0
	M1	226	225.56	262	272	-36.0	-46.0	-41.0
	M2	226	225.55	215	225	11.0	1.0	6.0
	M3	226	226.01	182	192	44.0	34.0	39.0
	S	226	226.06	154	164	72.0	62.0	67.0
MW-47	S	161	163.56	90	100	71.0	61.0	66.0
	M3	161	163.69	115	125	46.0	36.0	41.0
	M2	161	163.79	132	142	29.5	19.5	24.5
MW-64	M2	160	159.45	100	105	60.0	55.0	57.5
MW-79	M1	159	158.45	156	166	3.0	-7.0	-2.0
	M2	159	158.45	116	126	43.0	33.0	38.0
	S	159	158.47	89	99	70.0	60.0	65.0
MW-32	S	163	164.63	147	152	16.5	11.5	14.0
	M	163	164.62	162	172	1.5	-8.5	-3.5
	D	163	164.65	182	187	-18.5	-23.5	-21.0
MW-33	S	164	163.34	147	152	17.5	12.5	15.0
	M	164	163.34	162	172	2.5	-7.5	-2.5
	D	164	163.35	182	187	-17.5	-22.5	-20.0
MW-34	M3	145	144.69	111	121	34.0	24.0	29.0
	M2	145	144.55	131	141	14.0	4.0	9.0
	M1	145	144.39	151	161	-6.0	-16.0	-11.0
MW-35	S	154	153.63	84	94	70.0	60.0	65.0
	M2	154	153.64	100	110	54.0	44.0	49.0
	M1	154	153.63	155	165	-1.0	-11.0	-6.0
MW-36	S	143	143.04	73	83	70.0	60.0	65.0
	M2	143	143.03	131	141	12.0	2.0	7.0
MW-114	M2	147	146.37	120	130	27.0	17.0	22.0
	M1	147	146.35	177	187	-30.0	-40.0	-35.0
MW-129	M3	136	135.85	96	106	40.0	30.0	35.0
	M2	136	135.89	116	126	20.0	10.0	15.0
	M1	136	135.88	136	146	0.0	-10.0	-5.0
MW-162	M3	140	139.81	86	96	54.5	44.5	49.5
	M2	140	139.75	126	136	14.5	4.5	9.5
	M1	140	139.71	191	201	-50.5	-60.5	-55.5
MW-139	M3	149	148.58	119	129	30.0	20.0	25.0
	M2	149	148.57	154	164	-5.0	-15.0	-10.0
	M1	149	148.48	194	204	-45.0	-55.0	-50.0
MW-165	M3	143	142.66	95	105	48.5	38.5	43.5
	M2	143	142.73	125	135	18.5	8.5	13.5

Table 4-1
Wells in Hydraulic Monitoring Plan

Annual Environmental and System Performance Monitoring Plan
Demo 1 Groundwater Operable Unit

Well ID	Screen ID	Ground Elevation (ft bgs)	Top PVC or Steel Casing Elevation (ft NGVD)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Top of Screen Elevation (ft NGVD)	Bottom of Screen Elevation (ft NGVD)	Midscreen Elevation (ft NGVD)
	M1	143	142.72	185	195	-41.5	-51.5	-46.5
MW-172	M3	128	127.56	109	119	19.0	9.0	14.0
	M2	128	127.51	169	179	-41.0	-51.0	-46.0
	M1	128	127.51	199	209	-71.0	-81.0	-76.0
MW-210	M3	162	161.14	121	131	41.0	31.0	36.0
	M2	162	161.10	156	166	6.0	-4.0	1.0
	M1	162	161.10	201	211	-39.0	-49.0	-44.0
MW-214	M3	147	146.81	140	150	7.0	-3.0	2.0
	M2	147	146.81	165	175	-18.0	-28.0	-23.0
	M1	147	146.82	198	208	-51.0	-61.0	-56.0
MW-255	M3	167	166.84	136	146	31.0	21.0	26.0
	M2	167	166.79	170	180	-3.0	-13.0	-8.0
	M1	167	166.93	206	216	-39.0	-49.0	-44.0
MW-73	S	109	124.72	39	48	70.49	60.99	65.7
MW-74	M1	163	162.1	170	180	-7.46	-17.46	-12.5
	M2	163	162.13	125	135	37.55	27.55	32.6
	M3	163	162.13	100	110	62.54	52.54	57.5
MW-75	M1	150	149.26	140	150	10.06	0.06	5.1
	M2	150	149.36	115	125	35.06	25.06	30.1
	S	150	149.32	81	91	69.06	59.06	64.1
MW-76	M1	136	135.28	125	135	11.06	1.06	6.1
	M2	136	135.36	105	115	31.06	21.06	26.1
	S	136	135.36	85	95	51.06	41.06	46.1
MW-77	M1	151	150.87	180	190	-28.59	-38.59	-33.6
	M2	151	150.91	120	130	31.41	21.41	26.4
	S	151	150.88	83	93	68.41	58.41	63.4
MW-78	M3	146	145.90	85	95	61.0	51.0	56.0
	M2	146	145.70	115	125	31.0	21.0	26.0
	M1	146	145.90	135	145	11.0	1.0	6.0
Pew Road RA ETR System								
EW-D1-2	NA	200	197.31	175	215	25.0	-15.0	5.0
IW-D1-3	NA	201	201.19	165	245	36.0	-44.0	-4.0
IW-D1-4	NA	168	166.29	115	165	53.0	3.0	28.0
MW-248	M3	161	160.68	143	153	18.0	8.0	13.0
	M2	161	160.64	178	188	-17.0	-27.0	-22.0
	M1	161	160.67	161	216	0.3	-55.3	-27.5
MW-252	M3	162	161.34	115	125	47.0	37.0	42.0
	M2	162	161.34	145	155	17.0	7.0	12.0
	M1	162	161.38	174	184	-12.0	-22.0	-17.0
MW-258	M1	92	92.05	109	119	-16.9	-26.9	-21.9
	M2	92	92.04	87	92	5.1	0.1	2.6
	M3	92	91.96	77	82	15.1	10.1	12.6
NPSG	NA	NA	47.51	NA	NA	NA	NA	NA
MW-352	M1	65	64.2	44	46	-50.36	-60.36	-55.4
	M2	65	64.26	65	75	-0.36	-10.36	-5.4
	M3	65	64.28	43	53	21.64	11.64	16.6

Table 4-1
Wells in Hydraulic Monitoring Plan

Annual Environmental and System Performance Monitoring Plan
Demo 1 Groundwater Operable Unit

Well ID	Screen ID	Ground Elevation (ft bgs)	Top PVC or Steel Casing Elevation (ft NGVD)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Top of Screen Elevation (ft NGVD)	Bottom of Screen Elevation (ft NGVD)	Midscreen Elevation (ft NGVD)
MW-353	M1	56	55.73	107	117	-50.98	-60.98	-56.0
	M2	56	55.67	57	67	-0.98	-10.98	-6.0
	M3	56	55.59	35	45	21.02	11.02	16.0
MW-173	M3	193	192.57	188	198	5.0	-5.0	0.0
	M2	193	192.59	208	218	-15.0	-25.0	-20.0
	M1	193	192.57	243	253	-50.0	-60.0	-55.0
MW-175	M3	184	184.14	162	167	22.0	17.0	19.5
	M2	184	184.15	199	209	-15.0	-25.0	-20.0
	M1	184	184.11	264	274	-80.0	-90.0	-85.0
MW-186	M2	181	180.42	182	192	-1.1	-11.1	-6.1
	M1	181	180.44	202	212	-21.1	-31.1	-26.1
MW-211	M3	200	199.71	150	160	50.0	40.0	45.0
	M2	200	199.72	175	185	25.0	15.0	20.0
	M1	200	199.73	200	210	0.0	-10.0	-5.0
MW-221	M3	202	200.97	156	166	46.0	36.0	41.0
	M2	202	200.93	178	188	24.0	14.0	19.0
	M1	202	201.02	221	231	-19.0	-29.0	-24.0
MW-225	M3	152	151.89	125	135	27.0	17.0	22.0
	M2	152	151.86	145	155	7.0	-3.0	2.0
	M1	152	151.88	175	185	-23.0	-33.0	-28.0
MW-231	M3	161	160.21	116	126	45.5	35.5	40.5
	M2	161	160.22	166	176	-4.5	-14.5	-9.5
	M1	161	160.08	211	221	-49.5	-59.5	-54.5
MW-240	M3	151	150.54	105	115	46.0	36.0	41.0
	M2	151	150.55	125	135	26.0	16.0	21.0
	M1	151	150.55	198	208	-47.0	-57.0	-52.0
MW341	M4	218	217.78	182	187	36.5	31.5	34.0
	M3	218	218.38	210	220	8.5	-1.5	3.5
	M2	218	218.00	270	265	269.5	-46.5	111.5
	M1	218	217.91	290	300	-71.5	-81.5	-76.5
MW-531M1	M1	93	93.17	138	148	-44.84	-54.84	-49.8
MW-532M1	M1	110	110.44	168	178	-57.55	-67.55	-62.6
	M2	110	110.32	138	148	-27.55	-37.55	-32.6
MW-533M1	M1	110	110.30	160	170	-49.64	-59.64	-54.6
MW-542M1	M1	117	116.59	144	154	-27.19	-37.19	-32.2

Notes:

ft bgs = Feet below ground surface

All elevation measurements in feet NGVD (National Geodetic Vertical Datum) of 1929.

Injection and extraction well monitoring point elevations are for the drop tube located within the well.

NA = Not Applicable

Table 4-2
Demo Area 1
Synoptic Water Level Data and Differences - April 2010 through April 2011

Demolition Area 1 - 2011 Annual Report

					Prior Year Synoptic Data	Current Year Synoptic Data		Current Reporting Period	
Location	Ground Elevation (ft msl)	Measurement Point Elevation (ft msl)	Screen Top Elevation (ft msl)	Screen Bottom Elevation (ft msl)	Groundwater Elevation (ft msl) - 4/7/2010	Groundwater Elevation (ft msl) - 12/20/2010	Groundwater Elevation (ft msl) - 4/11/2011	Difference between 4/7/10 & 12/20/10 (ft)	Difference between 12/20/10 & 4/11/11 (ft)
D1-EW-1	145	145.10	36.00	-54.00	67.13	67.11	66.46	-0.02	-0.65
D1-EW-2	200	197.31	25.00	-15.00	59.58	59.38	58.87	-0.20	-0.51
D1-EW-501	148	147.15	59.56	-40.44	68.49	69.78	68.00	1.29	-1.78
D1-EW-502	138	149.92	50.37	-49.63	69.05	67.33	67.67	-1.72	0.34
D1-EW-503	178	175.22	29.74	-50.26	64.90	64.93	65.42	0.03	0.49
D1-IW-1	166	164.39	-53.97	-153.97	108.61	112.17	109.23	3.56	-2.94
D1-IW-3	201	201.19	36.00	-44.00	62.37	63.04	62.56	0.67	-0.48
D1-IW-4	168	166.29	53.04	3.04	69.19	63.96	68.69	-5.23	4.73
D1-IW-5	155	156.66	44.76	9.76	70.22	70.76	69.81	0.54	-0.95
MW-114M1	147	146.35	-30.27	-40.27	69.50	68.59	68.79	-0.91	0.20
MW-114M2	147	146.37	26.73	16.73	69.51	68.59	68.80	-0.92	0.21
MW-129M1	136	135.88	0.25	-9.75	69.53	69.56	68.79	0.03	-0.77
MW-129M2	136	135.89	20.25	10.25	69.52	69.56	68.79	0.04	-0.77
MW-129M3	136	135.85	40.25	30.25	69.52	69.56	68.79	0.04	-0.77
MW-139M1	149	148.48	-45.06	-55.06	68.94	68.79	68.18	-0.15	-0.61
MW-139M2	149	148.57	-5.06	-15.06	68.97	68.78	68.18	-0.19	-0.60
MW-139M3	149	148.58	29.94	19.94	68.98	68.79	68.19	-0.19	-0.60
MW-162M1	140	139.71	-50.28	-60.28	69.65	69.80	68.92	0.15	-0.88
MW-162M2	140	139.75	14.72	4.72	69.61	69.79	68.91	0.18	-0.88
MW-162M3	140	139.81	54.72	44.72	69.63	69.82	68.92	0.19	-0.90
MW-165M1	143	142.72	-41.35	-51.35	68.61	68.52	67.91	-0.09	-0.61
MW-165M2	143	142.73	18.65	8.65	68.59	68.53	67.89	-0.06	-0.64
MW-165M3	143	142.66	48.65	38.65	68.60	68.53	67.88	-0.07	-0.65
MW-172M1	128	127.51	-70.92	-80.92	68.48	68.40	67.75	-0.08	-0.65
MW-172M2	128	127.51	-40.92	-50.92	68.46	68.39	67.74	-0.07	-0.65
MW-172M3	128	127.56	19.08	9.08	68.50	68.42	67.77	-0.08	-0.65
MW-173M1	193	192.57	-50.42	-60.42	63.92	63.63	63.17	-0.29	-0.46
MW-173M2	193	192.59	-15.42	-25.42	63.97	63.84	63.32	-0.13	-0.52
MW-173M3	193	192.57	4.58	-5.42	63.96	63.80	63.32	-0.16	-0.48
MW-175M1	184	184.11	-79.57	-89.57	63.92	63.60	63.16	-0.32	-0.44
MW-175M2	184	184.15	-14.57	-24.57	64.13	63.97	63.49	-0.16	-0.48
MW-175M3	184	184.14	22.43	17.43	64.12	63.96	63.49	-0.16	-0.47
MW-186M1	181	180.42	-21.14	-31.14	64.29	64.14	63.67	-0.15	-0.47
MW-186M2	181	180.44	-1.14	-11.14	64.31	64.16	63.69	-0.15	-0.47
MW-210M1	162	161.10	-39.46	-49.46	67.59	67.61	67.05	0.02	-0.56
MW-210M2	162	161.10	5.54	-4.46	67.58	67.60	67.04	0.02	-0.56
MW-210M3	162	161.14	40.54	30.54	67.60	67.60	67.06	0.00	-0.54
MW-211M1	200	199.73	0.14	-9.86	62.65	62.46	61.96	-0.19	-0.50
MW-211M2	200	199.72	25.14	15.14	62.85	62.67	62.18	-0.18	-0.49
MW-211M3	200	199.71	50.14	40.14	63.58	63.39	62.90	-0.19	-0.49
MW-214M1	147	146.82	-50.54	-60.54	68.45	68.40	67.71	-0.05	-0.69
MW-214M2	147	146.81	-17.54	-27.54	68.46	68.41	67.75	-0.05	-0.66
MW-214M3	147	146.81	7.46	-2.54	68.51	68.47	67.76	-0.04	-0.71
MW-221M1	202	201.02	-19.44	-29.44	63.37	63.05	62.57	-0.32	-0.48
MW-221M2	202	200.93	23.56	13.56	63.39	63.08	62.58	-0.31	-0.50
MW-221M3	202	200.97	45.56	35.56	63.40	63.08	62.58	-0.32	-0.50
MW-225M1	152	151.88	-22.72	-32.72	61.62	60.91	60.60	-0.71	-0.31
MW-225M2	152	151.86	7.28	-2.72	60.98	60.10	59.87	-0.88	-0.23
MW-225M3	152	151.89	27.28	17.28	60.93	60.00	59.79	-0.93	-0.21
MW-231M1	161	160.08	-49.87	-59.87	62.03	61.35	61.01	-0.68	-0.34
MW-231M2	161	160.22	-4.87	-14.87	61.23	60.42	60.13	-0.81	-0.29
MW-231M3	161	160.21	45.13	35.13	61.17	60.34	60.07	-0.83	-0.27
MW-240M1	151	150.55	-46.68	-56.68	60.92	60.01	59.77	-0.91	-0.24
MW-240M2	151	150.55	26.32	16.32	60.53	59.47	59.32	-1.06	-0.15
MW-240M3	151	150.54	46.32	36.32	60.49	59.46	59.30	-1.03	-0.16
MW-248M1	161	160.67	-55.04	-65.04	57.30	55.68	55.64	-1.62	-0.04
MW-248M2	161	160.64	-16.74	-26.74	57.55	55.90	55.88	-1.65	-0.02
MW-248M3	161	160.68	18.26	8.26	57.56	55.93	55.90	-1.63	-0.03
MW-252M1	161	161.38	-12.60	-22.60	58.00	56.53	56.44	-1.47	-0.09
MW-252M2	161	161.34	16.40	6.40	58.00	56.54	56.45	-1.46	-0.09
MW-252M3	161	161.34	46.40	36.40	58.03	56.57	56.49	-1.46	-0.08
MW-255M1	167	166.93	-38.82	-48.82	69.06	69.23	68.46	0.17	-0.77
MW-255M2	167	166.79	-2.82	-12.82	69.05	69.22	68.47	0.17	-0.75
MW-255M3	167	166.84	31.18	21.18	69.05	69.24	68.45	0.19	-0.79
MW-258M1	92	92.05	-16.90	-26.90	N/A	55.45	55.48	N/A	0.03
MW-258M2	92	92.04	5.10	0.10	N/A	55.45	55.51	N/A	0.06
MW-258M3	92	91.96	15.10	10.10	N/A	55.46	55.51	N/A	0.05
MW-32D	163	164.65	-18.33	-23.33	69.02	69.09	68.39	0.07	-0.70
MW-32M	163	164.62	1.67	-8.33	69.00	69.07	68.32	0.07	-0.75
MW-32S	163	164.63	18.75	13.75	69.00	69.07	68.38	0.07	-0.69

Table 4-2
Demo Area 1
Synoptic Water Level Data and Differences - April 2010 through April 2011

Demolition Area 1 - 2011 Annual Report

					Prior Year Synoptic Data	Current Year Synoptic Data		Current Reporting Period	
Location	Ground Elevation (ft msl)	Measurement Point Elevation (ft msl)	Screen Top Elevation (ft msl)	Screen Bottom Elevation (ft msl)	Groundwater Elevation (ft msl) - 4/7/2010	Groundwater Elevation (ft msl) - 12/20/2010	Groundwater Elevation (ft msl) - 4/11/2011	Difference between 4/7/10 & 12/20/10 (ft)	Difference between 12/20/10 & 4/11/11 (ft)
MW-33D	164	163.35	-17.52	-22.52	68.75	68.82	68.12	0.07	-0.70
MW-33M	164	163.34	2.48	-7.52	68.74	68.82	68.12	0.08	-0.70
MW-33S	164	163.34	17.48	12.48	68.73	68.82	68.12	0.09	-0.70
MW-341M1	218	217.91	-71.14	-81.14	62.92	62.48	62.03	-0.44	-0.45
MW-341M2	218	218.00	-46.14	-51.14	63.73	63.41	62.95	-0.32	-0.46
MW-341M3	218	218.36	8.86	-1.14	64.43	64.25	63.73	-0.18	-0.52
MW-341M4	218	217.78	36.86	31.86	63.78	63.58	63.06	-0.20	-0.52
MW-34M1	145	144.39	-6.07	-16.07	69.39	69.44	68.71	0.05	-0.73
MW-34M2	145	144.55	13.93	3.93	69.39	69.48	68.71	0.09	-0.77
MW-34M3	145	144.69	33.93	23.93	69.39	69.50	68.72	0.11	-0.78
MW-352M1	65	64.20	-50.36	-60.36	N/A	50.87	50.99	N/A	0.12
MW-352M2	65	64.26	-0.36	-10.36	N/A	50.86	50.99	N/A	0.13
MW-352M3	65	64.28	21.64	11.64	N/A	51.81	51.88	N/A	0.07
MW-353M1	56	55.73	-50.98	-60.98	N/A	50.33	50.51	N/A	0.18
MW-353M2	56	55.67	-0.98	-10.98	N/A	50.42	50.59	N/A	0.17
MW-353M3	56	55.59	21.02	11.02	N/A	50.46	50.63	N/A	0.17
MW-35M1	154	153.63	-0.91	-10.91	68.94	68.84	68.21	-0.10	-0.63
MW-35M2	154	153.64	54.09	44.09	68.96	68.88	68.23	-0.08	-0.65
MW-35S	154	153.63	70.09	60.09	68.96	68.87	68.22	-0.09	-0.65
MW-36M2	144	143.03	12.52	2.52	69.54	69.67	68.88	0.13	-0.79
MW-36S	144	143.04	70.52	60.52	69.55	69.68	68.88	0.13	-0.80
MW-46D	226	225.56	-68.88	-78.88	68.43	69.20	68.19	0.77	-1.01
MW-46M1	226	225.56	-35.88	-45.88	67.73	68.70	67.65	0.97	-1.05
MW-46M2	226	225.55	11.12	1.12	67.73	68.72	67.60	0.99	-1.12
MW-46M3	226	226.01	44.06	34.06	67.72	68.69	67.68	0.97	-1.01
MW-46S	226	226.06	72.29	62.29	67.79	68.78	67.70	0.99	-1.08
MW-47M2	159	163.72	27.34	17.34	68.39	68.92	68.04	0.53	-0.88
MW-47M3	159	163.63	43.84	38.84	68.38	68.92	68.04	0.54	-0.88
MW-47S	159	163.50	68.84	58.84	68.40	68.92	68.06	0.52	-0.86
MW-64M2	160	159.45	59.88	54.88	70.46	70.36	69.71	-0.10	-0.65
MW-73S	109	124.72	70.49	60.99	NM	71.26	70.41	N/A	-0.85
MW-74M1	163	162.10	-7.46	-17.46	NM	N/A	69.52	N/A	N/A
MW-74M2	163	162.13	37.55	27.55	NM	N/A	69.56	N/A	N/A
MW-74M3	163	162.13	62.54	52.54	NM	N/A	69.54	N/A	N/A
MW-75M1	150	149.26	10.06	0.06	NM	N/A	69.55	N/A	N/A
MW-75M2	150	149.36	35.06	25.06	NM	N/A	69.58	N/A	N/A
MW-75S	150	149.32	69.06	59.06	NM	N/A	69.51	N/A	N/A
MW-76M1	136	135.28	11.06	1.06	NM	N/A	69.54	N/A	N/A
MW-76M2	136	135.36	31.06	21.06	NM	N/A	69.54	N/A	N/A
MW-76S	136	135.36	51.06	41.06	NM	N/A	69.54	N/A	N/A
MW-77M1	151	150.87	-28.59	-38.59	NM	N/A	69.53	N/A	N/A
MW-77M2	151	150.91	31.41	21.41	NM	N/A	69.57	N/A	N/A
MW-77S	151	150.88	68.41	58.41	NM	N/A	69.50	N/A	N/A
MW-78M1	146	145.91	11.35	1.35	70.26	70.45	69.56	0.19	-0.89
MW-78M2	146	145.67	31.19	21.19	70.25	70.43	69.54	0.18	-0.89
MW-78M3	146	145.91	61.35	51.35	70.25	70.47	69.60	0.22	-0.87
MW-79M1	159	158.45	3.09	-6.91	71.44	71.88	70.93	0.44	-0.95
MW-79M2	159	158.45	43.09	33.09	71.46	71.89	70.96	0.43	-0.93
MW-79S	159	158.47	70.09	60.09	71.44	71.91	70.92	0.47	-0.99
MW-531M1	93.16	93.17	-44.84	-54.84	56.90	55.00	55.05	-1.90	0.05
MW-532M1	110.45	110.44	-57.55	-67.55	56.69	N/A	54.75	N/A	N/A
MW-532M2	110.45	110.32	-27.55	-37.55	56.66	54.63	54.70	-2.03	0.07
MW-533M1	110.36	110.30	-49.64	-59.64	57.36	55.59	55.62	-1.77	0.03
MW-542M1	116.81	116.59	-27.19	-37.19	56.77	54.70	54.78	-2.07	0.08
North Pond Staff Gage	48	47.51	NA	NA	51.9* ('4/23/2010)	50.46	48.95	-1.44	-1.51

Notes:

Bolded wells were used in developing piezometric surface maps of the principal stressed zone of the aquifer
ft msl - Feet mean sea level
ft - Feet
NM - Not Measured
NA - Not Applicable. Staff gauge was not installed at that time.
Injection well elevations are not consistent with aquifer water levels

Table 4-3
Base Boundary System Startup Manual Water Level Data

Demolition Area 1 - 2011 Annual Report

Type	Location	Elev. (ft msl)	Northing (UTM-83m)	Easting (UTM-83m)	TOS Elev (ft msl)	BOS Elev (ft msl)	MPELEV	Elev (6/22/11) Day 1	Elev (6/23/11) Day 2	Elev (6/24/11) Day 3	Elev (6/28/11) Day 7	Elev (7/5/11) Day 14	Elev (7/6/11) Day 15
								Average Flow Rate (gpm)	50	50	52	55	55
Wells	**BHW5030020**	58.1	4616650.05	368103.3	39.96	38.00	59.79	51.09	51.11	51.18	51.11	50.96	50.97
	D1-EW-3	60.51	4616744.94	367963.77	-9.49	-109.49	62.1	48.2	47.24	47.24	47.24	47.08	47.1
	MW-258M1	92.1	4616575	368514.34	-16.90	-26.90	92.05	56.1	56.1	56.09	56.09	56.03	56.07
	MW-258M2	92.51	4616574.5	368514.34	5.51	0.51	92.04	56.13	56.14	56.12	56.13	56.07	56.08
	MW-258M3	92.51	4616575	368514.47	15.51	10.51	91.96	56.11	56.13	56.1	56.1	56.04	56.07
	MW-352M1	64.5	4616526.6	368100.15	-50.50	-60.50	64.22	51.4	51.42	51.43	51.41	51.29	51.3
	MW-352M2	64.5	4616526	368100.15	-0.50	-10.50	64.35	51.45	51.48	51.5	51.48	51.35	51.36
	MW-352M3	64.5	4616526.3	368100.45	21.50	11.50	64.35	52.14	52.22	52.27	52.2	52.04	52.04
	MW-353M1	55.83	4616603.74	368076.34	-51.17	-61.17	55.67	50.85	50.83	50.84	50.84	50.71	50.71
	MW-353M2	55.83	4616603.14	368076.34	-1.17	-11.17	55.61	50.94	50.93	50.94	50.92	50.8	50.79
	MW-353M3	55.83	4616603.44	368076.64	20.83	10.83	55.51	50.96	50.95	50.96	50.92	50.8	50.81
	MW-531M1	93.16	4616571.3	368515.28	-44.84	-54.84	93.17	55.64	55.65	55.65	55.63	55.57	55.55
	MW-532M1	110.45	4616629.91	368484.53	-57.55	-67.55	110.44	55.3	55.31	55.3	55.3	55.22	55.22
	MW-532M2	110.45	4616629.83	368484.48	-27.55	-37.55	110.32	55.25	55.25	55.24	55.24	55.17	55.17
	MW-542M1	116.81	4616695.94	368488.14	-27.19	-37.19	116.59	55.3	55.31	55.3	55.31	55.23	55.23
	MW-543M1	58.3	4616650.65	367923.29	-68.70	-78.70	57.8	48.5	48.43	48.44	48.43	48.28	48.28
	MW-543M2	58.3	4616650.85	367923.49	-34.70	-43.70	57.83	48.55	48.51	48.51	48.48	48.34	48.34
	MW-544M1	73.7	4616701.18	367942.17	-88.30	-98.30	73.22	48.57	48.48	48.49	48.49	48.33	48.34
	MW-544M2	73.3	4616700.3	367943.63	-38.70	-48.70	72.78	48.59	48.49	48.51	48.48	48.36	48.34
	MW-544M3	73.7	4616701.18	367942.59	-3.30	-13.30	73.22	48.68	48.61	48.6	48.62	48.47	48.49
	MW-545M1	62.8	4616742.53	367961.34	-99.20	-109.20	62.21	48.78	48.54	48.54	48.52	48.4	48.4
	MW-545M2	62.7	4616742.06	367962.89	-79.30	-89.30	62.17	48.82	48.62	48.64	48.63	48.5	48.49
	MW-545M3	62.8	4616742.73	367961.54	-39.20	-49.20	62.21	48.83	48.53	48.55	48.51	48.39	48.4
	MW-545M4	62.7	4616742.26	367963.09	-9.30	-19.30	62.17	48.9	48.65	48.65	48.62	48.5	48.52
	MW-546M1	62.8	4616791.7	367981.78	-77.20	-87.20	62.31	48.73	48.63	48.62	48.63	48.52	48.5
	MW-546M2	62.8	4616791.9	367981.98	-37.20	-47.20	62.28	48.81	48.7	48.71	48.7	48.59	48.56
	MW-554M1	54.3	4616816.24	367776.69	-65.70	-75.70	54.95	46.02	45.99	40.09	45.97	45.84	45.8
	MW-554M2	54.3	4616816.17	367776.65	-35.70	-45.70	54.95	45.87	45.86	45.88	45.86	45.69	45.67
	PZD1001	70.38	4616840.9	368058.3	51.38	41.38	72.59	49.45	49.57	48.76	49.98	49.92	49.91
	XX9514	56.9	4616702.05	368021.79	-45.10	-55.10	58.66	49.4	49.32	49.34	49.31	49.19	49.18
Staff Gauges	North Pond	50.16	4616341.60	367999.16	na	na	50.16	51.76	51.86	51.92	51.81	51.71	51.7
	South Pond	47.79	4616178.24	367781.80	na	na	47.79	50.75	50.83	50.86	50.81	50.68	50.67
	West Pond	43.87	4616161.85	367728.90	na	na	43.87	48.04	48.19	48.25	48.1	47.87	47.85

Notes

Bolded values were used in plotting water level contour maps
UTM-83m - Universal Transverse Mercator 1983 meters
ft msl - Feet Mean Sea Level
Elev. - Elevation
TOS - Top of Screen
BOS - Bottom of Screen
na - Not Applicable
gpm - Gallons Per Minute

Table 4-3
Base Boundary System Startup Manual Water Level Data

Demolition Area 1 - 2011 Annual Report

Type	Location	Elev. (ft msl)	Northing (UTM-83m)	Easting (UTM-83m)	TOS Elev (ft msl)	BOS Elev (ft msl)	MPELEV	Elev (7/13/11) Day 21	Elev (7/19/11) Day 27	Elev (8/17/11) Day 57
								30	30	30
Wells	**BHW5030020**	58.1	4616650.05	368103.3	39.96	38.00	59.79	50.98	50.94	50.89
	D1-EW-3	60.51	4616744.94	367963.77	-9.49	-109.49	62.1	47.47	47.41	47.10
	MW-258M1	92.1	4616575	368514.34	-16.90	-26.90	92.05	55.97	55.93	55.60
	MW-258M2	92.51	4616574.5	368514.34	5.51	0.51	92.04	56.03	56.03	55.63
	MW-258M3	92.51	4616575	368514.47	15.51	10.51	91.96	55.99	55.97	55.62
	MW-352M1	64.5	4616526.6	368100.15	-50.50	-60.50	64.22	51.29	51.23	50.96
	MW-352M2	64.5	4616526	368100.15	-0.50	-10.50	64.35	51.34	51.32	51.03
	MW-352M3	64.5	4616526.3	368100.45	21.50	11.50	64.35	52.09	52.06	51.99
	MW-353M1	55.83	4616603.74	368076.34	-51.17	-61.17	55.67	50.7	50.65	50.36
	MW-353M2	55.83	4616603.14	368076.34	-1.17	-11.17	55.61	50.79	50.74	50.45
	MW-353M3	55.83	4616603.44	368076.64	20.83	10.83	55.51	50.8	50.75	50.50
	MW-531M1	93.16	4616571.3	368515.28	-44.84	-54.84	93.17	55.52	55.49	55.14
	MW-532M1	110.45	4616629.91	368484.53	-57.55	-67.55	110.44	55.17	55.13	54.77
	MW-532M2	110.45	4616629.83	368484.48	-27.55	-37.55	110.32	55.12	55.06	54.73
	MW-542M1	116.81	4616695.94	368488.14	-27.19	-37.19	116.59	55.18	55.12	54.76
	MW-543M1	58.3	4616650.65	367923.29	-68.70	-78.70	57.8	48.29	48.25	47.92
	MW-543M2	58.3	4616650.85	367923.49	-34.70	-43.70	57.83	48.34	48.31	47.99
	MW-544M1	73.7	4616701.18	367942.17	-88.30	-98.30	73.22	48.34	48.29	47.99
	MW-544M2	73.3	4616700.3	367943.63	-38.70	-48.70	72.78	48.37	48.33	48.00
	MW-544M3	73.7	4616701.18	367942.59	-3.30	-13.30	73.22	48.46	48.42	48.12
	MW-545M1	62.8	4616742.53	367961.34	-99.20	-109.20	62.21	48.46	48.43	48.06
	MW-545M2	62.7	4616742.06	367962.89	-79.30	-89.30	62.17	48.55	48.5	48.17
	MW-545M3	62.8	4616742.73	367961.54	-39.20	-49.20	62.21	48.47	48.45	48.11
	MW-545M4	62.7	4616742.26	367963.09	-9.30	-19.30	62.17	48.56	48.53	48.19
	MW-546M1	62.8	4616791.7	367981.78	-77.20	-87.20	62.31	48.44	48.47	48.12
	MW-546M2	62.8	4616791.9	367981.98	-37.20	-47.20	62.28	48.58	48.53	48.19
	MW-554M1	54.3	4616816.24	367776.69	-65.70	-75.70	54.95	45.78	45.75	45.40
	MW-554M2	54.3	4616816.17	367776.65	-35.70	-45.70	54.95	45.63	45.59	45.25
	PZD1001	70.38	4616840.9	368058.3	51.38	41.38	72.59	49.69	49.62	49.24
	XX9514	56.9	4616702.05	368021.79	-45.10	-55.10	58.66	49.18	49.23	48.83
Staff Gauges	North Pond	50.16	4616341.60	367999.16	na	na	50.16	51.75	51.73	51.68
	South Pond	47.79	4616178.24	367781.80	na	na	47.79	50.69	50.69	50.6
	West Pond	43.87	4616161.85	367728.90	na	na	43.87	47.93	47.88	47.85

Notes

Bolded values were used in plotting water level contour maps
UTM-83m - Universal Transverse Mercator 1983 meters
ft msl - Feet Mean Sea Level
Elev. - Elevation
TOS - Top of Screen
BOS - Bottom of Screen
na - Not Applicable
gpm - Gallons Per Minute

Table 4-4

Base Boundary System Startup Hydraulic Conductivity Analysis

Demolition Area 1 - 2011 Annual Report

Well	Northing (UTM-83m)	Easting (UTM-83m)	Elev. (ft msl)	Monitoring Point ELEV. (ft msl)	TOS Elev (ft msl)	BOS Elev (ft msl)	Calculated Hydraulic Conductivity: Time-Drawdown (ft/day)	Calculated Hydraulic Conductivity (ft/day) - Distance Drawdown (ft/day)
D1-EW-3	4616744.94	367963.77	60.51	62.1	-9.49	-109.49	105 (T-D) & 95 (Step Test)	
MW-544M2	4616700.3	367943.63	73.3	72.78	-38.70	-48.70	70	
MW-545M2	4616742.06	367962.89	62.7	62.17	-79.30	-89.30	100	100
MW-545M4	4616742.26	367963.09	62.7	62.17	-9.30	-19.30	120	
MW-546M2	4616791.9	367981.98	62.8	62.28	-37.20	-47.20	75	
XX9514	4616702.05	368021.79	56.9	58.66	-45.10	-55.10	85	

Notes:

Elev. - Elevation
ft msl - Feet Mean Sea Level
TOS - Top of Screen
BOS - Bottom of Screen
ft/day - Feet per day
T-D - Time - Drawdown

Table 5-1
Chemical Monitoring Schedule

Demolition Area 1 - 2011 Annual Monitoring Report

Well ID	Zone	Perchlorate Sampling Rounds/Year	RDX Sampling Rounds/Year	Metals Sampling Rounds/Year[(1)]	December Sampling Round - 2010	April Sampling Round - 2011	August Sampling Round - 2011
MW-114M1	1	2	2		P,E	P,E	
MW-114M2	1	2	2		P,E	P,E	
MW-129M1	1	1	1			P,E	
MW-129M2	1	2	2		P,E	P,E	
MW-129M3	1	1	1			P,E	
MW-139M1	1	1	1			P,E	
MW-139M2	1	1	2		E	P,E	
MW-139M3	1	0	0				
MW-162M1	1	0	0				
MW-162M2	1	1	0			P	
MW-162M3	1	0	0		P,E		
MW-165M1	1	1	1			P,E	
MW-165M2	1	2	2		P,E	P,E	
MW-165M3	1	0	0				
MW-172M1	1	0	0				
MW-172M2	1	1	0			P	
MW-172M3	1	0	0				
MW-19D	1	0	0				
MW-19S	1	0	2	1	E	E,M	
MW-214M1	1	0	0		P,E		
MW-214M2	1	0	0				
MW-214M3	1	0	0				
MW-255M1	1	0	0				
MW-255M2	1	1	0			P	
MW-255M3	1	0	0				
MW-31D	1	0	0				
MW-31M	1	1	2		E	P,E	
MW-31S	1	1	2		E	P,E	
MW-32D	1	0	0				
MW-32M	1	0	0				
MW-32S	1	0	0				
MW-33D	1	0	0				
MW-33M	1	0	0				
MW-33S	1	0	0				
MW-34M1	1	1	1			P,E	
MW-34M2	1	1	1			P,E	
MW-34M3	1	0	0				
MW-35M1	1	0	0		P,E		
MW-35M2	1	0	0				
MW-35S	1	0	0				
MW-36M1	1	1	0			P	
MW-36M2	1	1	1			P,E	
MW-36S	1	0	0				
MW-73S	1	1	2	1	E	P,E,M	
MW-74M1	1	0	0		P,E		
MW-74M2	1	0	0				
MW-74M3	1	0	0		P,E		
MW-75M1	1	1	1			P,E	
MW-75M2	1	1	1			P,E	
MW-75S	1	0	0		P, E		
MW-76M1	1	1	1			P,E	
MW-76M2	1	2	2		P,E	P,E	
MW-76S	1	1	1			P,E	
MW-77M1	1	1	1			P,E	
MW-77M2	1	2	2		P,E	P,E	
MW-77S	1	1	1			P,E	
MW-78M1	1	1	1			P,E	
MW-78M2	1	1	1			P,E	
MW-78M3	1	0	0		P,E		
MW-79M1	1	0	0				
MW-79M2	1	0	0		P,E		
MW-79S	1	0	0		P,E		
D1-EW-1	1	3	3		P,E	P,E	P,E
D1-EW-501	1	3	3		P,E	P,E	P,E

Table 5-1
Chemical Monitoring Schedule

Demolition Area 1 - 2011 Annual Monitoring Report

Well ID	Zone	Perchlorate Sampling Rounds/Year	RDX Sampling Rounds/Year	Metals Sampling Rounds/Year[(1)]	December Sampling Round - 2010	April Sampling Round - 2011	August Sampling Round - 2011
D1-EW-502	1	3	3		P,E	P,E	P,E
MW-173M1	2	0	0				
MW-173M2	2	0	0				
MW-173M3	2	0	0				
MW-175M1	2	0	0				
MW-175M2	2	0	0				
MW-175M3	2	0	0				
MW-186M1	2	0	0		P		
MW-186M2	2	0	0		P,E		
MW-210M1	2	1	1			P,E	
MW-210M2	2	1	1			P,E	
MW-210M3	2	1	1			P,E	
MW-211M1	2	2	2		P, E	P,E	
MW-211M2	2	2	2		P, E	P,E	
MW-211M3	2	0	0				
MW-221M1	2	0	0		P		
MW-221M2	2	0	0		N/A		
MW-221M3	2	0	0		N/A		
MW-341M4	2	1	1			P,E	
MW-341M3	2	2	1		P	P,E	
MW-341M2	2	1	0			P	
MW-341M1	2	0	0				
D1-EW-503	2	3	3		P,E	P,E	P,E
MW-225M1	3	0	0				
MW-225M2	3	3	3		P,E	P,E	P,E
MW-225M3	3	3	3		P,E	P,E	P,E
MW-231M1	3	0	0				
MW-231M2	3	0	0				
MW-231M3	3	0	0				
MW-240M1	3	1	0			P	
MW-240M2	3	1	0			P	
MW-240M3	3	1	0			P	
MW-248M1	3	0	0				
MW-248M2	3	1	0			P	
MW-248M3	3	1	0			P	
MW-252M1	3	1	0			P	
MW-252M2	3	1	0			P	
MW-252M3	3	1	0			P	
MW-258M1	3	3	0		P	P	P
MW-258M2	3	3	3		P,E	P,E	P,E
MW-258M3	3	3	3		P,E	P,E	P,E
MW-352M1	3	1	0			P	
MW-352M2	3	1	0			P	
MW-352M3	3	0	0				
MW-353M1	3	1	0			P	
MW-353M2	3	1	0			P	
MW-353M3	3	0	0				
MW-531M1	3	1	0			P	
MW-532M1	3	3	3		P,E	P,E	P,E
MW-532M2	3	3	3		P,E	P,E	P,E
MW-533M1	3	0	0				
MW-542M1	3	1	0			P	
95-14	3	3	0		P	P	P

NOTES:

1. P = Perchlorate; E = Explosives, M = Metals

Table 5-2
Summary of Perchlorate/RDX/HMX for Chemical Monitoring Program - September 2010 through August 2011

Demolition Area 1 - 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	Date
D1-EW-1	1	N	0.515	0.144 J	0.205 U	8/23/2011
D1-EW-1	1	N	0.938	0.444	0.235 U	4/19/2011
D1-EW-1	1	N	1.17	0.665	0.206 U	12/21/2010
D1-EW-1	1	N	1.52	0.792	0.187 J	9/7/2010
D1-EW-501	1	FD	N/A	2.14	1.12	8/23/2011
D1-EW-501	1	N	0.324	1.96	1.14	8/23/2011
D1-EW-501	1	N	0.362	1.9 J	0.809 J	4/19/2011
D1-EW-501	1	N	0.622	4.12	1.52	1/6/2011
D1-EW-502	1	N	1.57	1.69	0.357	8/23/2011
D1-EW-502	1	N	1.59	1.21	0.417	4/19/2011
D1-EW-502	1	N	1.52	1.4	0.349	12/21/2010
MW-114M1	1	N	0.401	0.215 U	0.215 U	4/12/2011
MW-114M1	1	N	0.679	0.343	0.217 U	12/23/2010
MW-114M2	1	N	0.7	0.218 U	0.218 U	4/12/2011
MW-114M2	1	N	0.654	0.206 U	0.206 U	12/23/2010
MW-129M1	1	N	0.102	0.215 U	0.215 U	5/3/2011
MW-129M2	1	N	0.071	0.208 U	0.208 U	5/3/2011
MW-129M2	1	N	0.061	0.227 U	0.227 U	12/27/2010
MW-129M3	1	N	0.231	0.217 U	0.217 U	5/3/2011
MW-139M1	1	N	0.015 J	0.222 U	0.222 U	4/28/2011
MW-139M2	1	FD	1.04	N/A	N/A	4/28/2011
MW-139M2	1	N	1.07	0.217 U	0.217 U	4/28/2011
MW-139M2	1	N	N/A	0.206 U	0.206 U	12/27/2010
MW-139M3	1	N	0.118	0.21 U	0.21 U	4/28/2011
MW-162M2	1	N	0.046 J	N/A	N/A	4/18/2011
MW-165M1	1	N	0.015 J	0.227 U	0.227 U	4/19/2011
MW-165M2	1	N	0.233	0.23 U	0.23 U	4/19/2011
MW-165M2	1	N	0.277	0.22 U	0.22 U	12/23/2010
MW-165M3	1	N	0.027 J	0.222 UJ	0.222 UJ	4/19/2011
MW-172M1	1	N	0.025 J	N/A	N/A	4/27/2011
MW-172M2	1	N	0.121	0.213 U	0.213 U	4/27/2011
MW-172M3	1	N	0.097	0.215 U	0.215 U	4/27/2011
MW-19S	1	N	0.293	12.3	3.61	4/18/2011
MW-19S	1	N	N/A	6.26	6.2	12/22/2010
MW-214M2	1	N	0.05 U	N/A	N/A	4/12/2011
MW-255M2	1	N	0.086	N/A	N/A	4/26/2011
MW-31M	1	N	0.456	6.88	4.13	4/18/2011
MW-31M	1	N	0.425	4.58	3.7	12/21/2010
MW-31S	1	FD	N/A	2.47	1.89	4/18/2011
MW-31S	1	N	0.303	3.06	2.04	4/18/2011
MW-31S	1	N	0.651	4.39	2.2	12/21/2010
MW-32D	1	N	0.271	N/A	N/A	4/27/2011
MW-32M	1	N	0.177	N/A	N/A	4/28/2011
MW-32S	1	N	0.04 J	N/A	N/A	4/27/2011
MW-33D	1	N	0.05 U	N/A	N/A	4/27/2011
MW-33M	1	N	0.05 U	N/A	N/A	4/27/2011
MW-33S	1	N	0.045 J	N/A	N/A	4/27/2011
MW-34M1	1	FD	2.97	N/A	N/A	4/28/2011
MW-34M1	1	N	3.03	0.22 U	0.22 U	4/28/2011
MW-34M2	1	N	0.754	0.217 U	0.217 U	4/28/2011
MW-34M3	1	N	0.027 J	0.21 U	0.21 U	5/3/2011
MW-35M2	1	N	0.033 J	N/A	N/A	4/26/2011
MW-36M1	1	FD	1.76	N/A	N/A	4/12/2011
MW-36M1	1	N	1.75	N/A	N/A	4/12/2011
MW-36M2	1	N	1.7	0.217 U	0.217 U	4/12/2011

Table 5-2
Summary of Perchlorate/RDX/HMX for Chemical Monitoring Program - September 2010 through August 2011

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	Date
MW-73S	1	N	0.548	2.4	0.719	4/18/2011
MW-73S	1	N	0.09	3.49	2.9	12/22/2010
MW-74M2	1	N	0.254	N/A	N/A	4/18/2011
MW-75M1	1	N	0.12	0.215 U	0.215 U	4/18/2011
MW-75M2	1	N	0.51	0.22 U	0.22 U	4/18/2011
MW-76M1	1	FD	N/A	3.57	2.81	4/20/2011
MW-76M1	1	N	0.296	3.59	2.72	4/20/2011
MW-76M1	1	FD	N/A	13.9	10.1	12/22/2010
MW-76M1	1	N	1.05	13.7	9.82	12/22/2010
MW-76M2	1	FD	N/A	5.95 J	4.78 J	4/20/2011
MW-76M2	1	N	0.921	5.8	4.48	4/20/2011
MW-76M2	1	N	1.14	13.7	10.4	12/22/2010
MW-76S	1	N	0.744	0.291	0.104 U	4/20/2011
MW-77M1	1	N	0.08	0.105 UJ	0.105 UJ	4/20/2011
MW-77M2	1	FD	N/A	0.672 J	0.601 J	4/20/2011
MW-77M2	1	N	0.321	0.653	0.654	4/20/2011
MW-77M2	1	FD	N/A	5.09	3.9	12/21/2010
MW-77M2	1	N	0.477	4.89	3.82	12/21/2010
MW-77S	1	N	0.027 J	0.105 U	0.105 U	4/20/2011
MW-78M1	1	N	0.06	0.105 U	0.105 U	4/20/2011
MW-78M2	1	N	0.6	0.104 U	0.104 U	4/20/2011
D1-EW-503	2	N	0.4	0.206 UJ	0.206 UJ	8/23/2011
D1-EW-503	2	N	0.423	0.225 U	0.225 U	4/19/2011
D1-EW-503	2	N	0.404	0.241 U	0.241 U	12/21/2010
MW-210M1	2	N	0.288	0.222 U	0.222 U	4/19/2011
MW-210M2	2	FD	2.78	N/A	N/A	4/19/2011
MW-210M2	2	N	2.81	0.208 UJ	0.208 UJ	4/19/2011
MW-210M2	2	FD	3.54	N/A	N/A	12/23/2010
MW-210M2	2	N	3.48	0.215 U	0.215 U	12/23/2010
MW-210M3	2	N	0.031 J	0.222 UJ	0.222 UJ	4/19/2011
MW-211M1	2	FD	59.8	14.3	0.791	4/26/2011
MW-211M1	2	N	60.2	14.9	0.908	4/26/2011
MW-211M1	2	FD	62.8	20.4	0.862	12/21/2010
MW-211M1	2	N	64.8	21.8	0.91	12/21/2010
MW-211M2	2	N	0.031 J	0.222 U	0.222 U	4/26/2011
MW-211M2	2	N	0.0222 J	0.22 U	0.22 U	12/21/2010
MW-211M3	2	N	0.042 J	0.222 U	0.222 U	4/26/2011
MW-341M1	2	N	0.05 U	N/A	N/A	4/13/2011
MW-341M2	2	N	0.637	N/A	N/A	4/14/2011
MW-341M3	2	N	0.984	0.222 UJ	0.222 UJ	4/14/2011
MW-341M3	2	N	1.58	N/A	N/A	12/28/2010
MW-341M4	2	N	0.169	0.222 UJ	0.222 UJ	4/14/2011
MW-225M2	3	N	0.05 U	0.206 U	0.206 U	8/24/2011
MW-225M2	3	N	0.05 U	0.106 U	0.106 U	4/21/2011
MW-225M2	3	N	0.05 U	0.206 U	0.206 U	12/21/2010
MW-225M3	3	N	0.072	0.22 U	0.22 U	8/24/2011
MW-225M3	3	N	0.065	0.102 U	0.102 U	4/21/2011
MW-225M3	3	N	0.169	0.202 U	0.202 U	12/21/2010
MW-231M2	3	N	0.156	0.104 U	0.104 U	4/21/2011
MW-231M3	3	N	0.033 J	0.105 U	0.105 U	4/21/2011
MW-240M1	3	N	0.023 J	N/A	N/A	4/21/2011
MW-240M2	3	N	0.1	N/A	N/A	4/21/2011
MW-240M3	3	N	0.022 J	N/A	N/A	4/21/2011
MW-248M2	3	N	0.149	N/A	N/A	4/21/2011
MW-248M3	3	N	0.109	N/A	N/A	4/21/2011

Table 5-2
Summary of Perchlorate/RDX/HMX for Chemical Monitoring Program - September 2010 through August 2011

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	Date
MW-252M1	3	N	0.052	N/A	N/A	4/26/2011
MW-252M2	3	N	0.064	N/A	N/A	4/26/2011
MW-252M3	3	N	0.084	N/A	N/A	4/26/2011
MW-258M1	3	N	3.29	N/A	N/A	8/22/2011
MW-258M1	3	N	1.45	N/A	N/A	4/14/2011
MW-258M1	3	N	1.11	N/A	N/A	12/22/2010
MW-258M2	3	N	0.117	N/A	N/A	8/22/2011
MW-258M2	3	N	0.15	0.222 UJ	0.222 UJ	4/14/2011
MW-258M2	3	N	0.204	0.21 U	0.21 U	12/22/2010
MW-258M3	3	N	0.069	N/A	N/A	8/22/2011
MW-258M3	3	N	0.056	0.222 UJ	0.222 UJ	4/14/2011
MW-258M3	3	N	0.051	0.217 U	0.217 U	12/22/2010
MW-352M1	3	N	0.128	N/A	N/A	4/15/2011
MW-352M1	3	N	0.138	N/A	N/A	12/28/2010
MW-352M2	3	N	0.05 U	N/A	N/A	4/15/2011
MW-352M2	3	N	0.05 U	N/A	N/A	12/28/2010
MW-352M3	3	N	0.05 U	N/A	N/A	4/15/2011
MW-352M3	3	N	0.05 U	N/A	N/A	12/28/2010
MW-353M1	3	N	0.117	N/A	N/A	4/15/2011
MW-353M1	3	N	0.155	N/A	N/A	12/29/2010
MW-353M2	3	N	0.05 U	N/A	N/A	4/15/2011
MW-353M2	3	N	0.05 U	N/A	N/A	12/29/2010
MW-353M3	3	N	0.05 U	N/A	N/A	4/15/2011
MW-353M3	3	N	0.05 U	N/A	N/A	12/29/2010
MW-531M1	3	N	0.304	N/A	N/A	4/14/2011
MW-531M1	3	N	0.313	N/A	N/A	12/22/2010
MW-532M1	3	N	8.62	N/A	N/A	8/22/2011
MW-532M1	3	FD	6.52	N/A	N/A	4/14/2011
MW-532M1	3	N	6.36	0.374 J	0.21 UJ	4/14/2011
MW-532M1	3	FD	5.85	N/A	N/A	12/30/2010
MW-532M1	3	N	5.89	0.177 J	0.222 U	12/30/2010
MW-532M2	3	FD	16	N/A	N/A	8/22/2011
MW-532M2	3	N	16.3	N/A	N/A	8/22/2011
MW-532M2	3	FD	16.8	N/A	N/A	4/14/2011
MW-532M2	3	N	16.8	0.534	0.22 U	4/14/2011
MW-532M2	3	FD	21.3	N/A	N/A	12/30/2010
MW-532M2	3	N	21.2	0.833	0.215 U	12/30/2010
MW-533M1	3	N	0.172	N/A	N/A	4/14/2011
MW-533M1	3	N	0.164	N/A	N/A	12/22/2010
MW-542M1	3	N	0.188	N/A	N/A	4/14/2011
MW-542M1	3	N	0.275	N/A	N/A	12/30/2010
MW-543M1	3	N	0.11 J	0.2 U	0.2 U	6/23/2011
MW-543M1	3	N	0.078 J	0.2 U	0.2 U	11/30/2010
MW-543M2	3	N	0.15 J	0.2 U	0.2 U	6/23/2011
MW-543M2	3	N	0.12 J	0.2 U	0.2 U	12/1/2010
MW-544M1	3	FD	3.37	0.26 J	0.2 U	7/20/2011
MW-544M1	3	N	4.14	0.25 J	0.2 U	7/20/2011
MW-544M1	3	N	5.8	1.36 UJ	0.2 U	6/21/2011
MW-544M1	3	N	0.78	0.2 U	0.2 U	12/13/2010
MW-544M2	3	N	0.11 J	0.2 U	0.2 U	6/22/2011
MW-544M2	3	N	0.3	0.2 U	0.2 U	12/10/2010
MW-544M3	3	N	0.072 J	0.2 U	0.2 U	6/21/2011
MW-544M3	3	N	0.16 J	0.2 U	0.2 U	12/9/2010
MW-545M1	3	N	4.16	0.37 J	0.2 U	6/20/2011
MW-545M1	3	N	0.87	0.2 UJ	0.2 U	12/7/2010

Table 5-2
Summary of Perchlorate/RDX/HMX for Chemical Monitoring Program - September 2010 through August 2011

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	Date
MW-545M2	3	N	7.05	0.5	0.2 U	6/16/2011
MW-545M2	3	FD	12	1.06 J	0.2 U	12/7/2010
MW-545M2	3	N	12.2	1.08 J	0.2 U	12/7/2010
MW-545M3	3	FD	7.09	0.58 J	0.2 U	6/16/2011
MW-545M3	3	N	7	0.59 J	0.2 U	6/16/2011
MW-545M3	3	N	8.96	0.85 J	0.2 U	12/6/2010
MW-545M4	3	N	2.54	0.2 U	0.2 U	6/16/2011
MW-545M4	3	N	2.94	0.2 UJ	0.2 U	12/8/2010
MW-546M1	3	N	0.27	0.2 U	0.2 U	6/20/2011
MW-546M1	3	N	0.19 J	0.2 U	0.2 U	12/13/2010
MW-546M2	3	N	0.19 J	0.2 U	0.2 U	6/20/2011
MW-546M2	3	N	0.17 J	0.2 U	0.2 U	12/13/2010
MW-554M1	3	N	5.38	0.32 J	0.2 U	6/29/2011
MW-554M1	3	N	5.09	0.25 J	0.2 U	5/20/2011
MW-554M2	3	N	2.68	0.2 U	0.2 U	6/29/2011
MW-554M2	3	N	3.02	0.84 U	0.2 U	5/20/2011
XX9514	3	N	9.59	N/A	N/A	8/23/2011
XX9514	3	FD	4.23	N/A	N/A	4/15/2011
XX9514	3	N	4.58	N/A	N/A	4/15/2011
XX9514	3	N	3.85	N/A	N/A	12/23/2010

Notes:

N = Normal Field Sample
FD = Field Duplicate
N/A = Not Applicable
U = Non-Detect
J = Estimated Concentration
UJ = Estimated Non-Detect

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

Demolition Area 1 - 2011 Annual Report

Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
D1-EW-1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.14	J	0.21	0.034	08/23/2011
D1-EW-1	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	08/23/2011
D1-EW-1	N	ND for 18 Explosives		SW8330	ND	UJ	ND	ND	08/23/2011
D1-EW-1	N	Perchlorate		SW6860	0.52		0.050	0.0070	08/23/2011
D1-EW-1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.44		0.24	0.039	04/19/2011
D1-EW-1	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	04/19/2011
D1-EW-1	N	ND for 18 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
D1-EW-1	N	Perchlorate		SW6860	0.94		0.050	0.0070	04/19/2011
D1-EW-1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.67		0.21	0.034	12/21/2010
D1-EW-1	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	12/21/2010
D1-EW-1	N	ND for 18 Explosives		SW8330	ND	UJ	ND	ND	12/21/2010
D1-EW-1	N	Perchlorate		SW6860	1.2		0.050	0.0070	12/21/2010
D1-EW-1	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	0.19	J	0.22	0.087	09/07/2010
D1-EW-1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.79		0.22	0.037	09/07/2010
D1-EW-1	N	ND for 17 Explosives		SW8330	ND	U	ND	ND	09/07/2010
D1-EW-1	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	09/07/2010
D1-EW-1	N	Perchlorate		SW6860	1.5		0.050	0.0070	09/07/2010
D1-EW-501	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	1.1		0.20	0.081	08/23/2011
D1-EW-501	FD	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	1.1		0.20	0.080	08/23/2011
D1-EW-501	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	2		0.20	0.034	08/23/2011
D1-EW-501	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	2.1		0.20	0.034	08/23/2011
D1-EW-501	N	ND for 17 Explosives		SW8330	ND	U	ND	ND	08/23/2011
D1-EW-501	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	08/23/2011
D1-EW-501	FD	ND for 17 Explosives		SW8330	ND	U	ND	ND	08/23/2011
D1-EW-501	FD	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	08/23/2011
D1-EW-501	N	Perchlorate		SW6860	0.32		0.050	0.0070	08/23/2011
D1-EW-501	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	0.81	J	0.21	0.082	04/19/2011
D1-EW-501	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	1.9	J	0.21	0.034	04/19/2011
D1-EW-501	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
D1-EW-501	N	Perchlorate		SW6860	0.36		0.050	0.0070	04/19/2011
D1-EW-501	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	1.5		0.21	0.083	01/06/2011
D1-EW-501	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	4.1		0.21	0.035	01/06/2011
D1-EW-501	N	ND for 17 Explosives		SW8330	ND	U	ND	ND	01/06/2011
D1-EW-501	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	01/06/2011
D1-EW-501	N	Perchlorate		SW6860	0.62		0.050	0.0070	01/06/2011

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
D1-EW-502	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	0.36		0.21	0.083	08/23/2011
D1-EW-502	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	1.7		0.21	0.035	08/23/2011
D1-EW-502	N	ND for 17 Explosives		SW8330	ND	U	ND	ND	08/23/2011
D1-EW-502	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	08/23/2011
D1-EW-502	N	Perchlorate		SW6860	1.6		0.050	0.0070	08/23/2011
D1-EW-502	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	0.42		0.22	0.087	04/19/2011
D1-EW-502	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	1.2		0.22	0.037	04/19/2011
D1-EW-502	N	ND for 17 Explosives		SW8330	ND	U	ND	ND	04/19/2011
D1-EW-502	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
D1-EW-502	N	Perchlorate		SW6860	1.6		0.050	0.0070	04/19/2011
D1-EW-502	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	0.35		0.21	0.083	12/21/2010
D1-EW-502	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	1.4		0.21	0.035	12/21/2010
D1-EW-502	N	ND for 17 Explosives		SW8330	ND	U	ND	ND	12/21/2010
D1-EW-502	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	12/21/2010
D1-EW-502	N	Perchlorate		SW6860	1.5		0.050	0.0070	12/21/2010
D1-EW-503	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	08/23/2011
D1-EW-503	N	Perchlorate		SW6860	0.4		0.050	0.0070	08/23/2011
D1-EW-503	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/19/2011
D1-EW-503	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
D1-EW-503	N	Perchlorate		SW6860	0.42		0.050	0.0070	04/19/2011
D1-EW-503	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/21/2010
D1-EW-503	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/21/2010
D1-EW-503	N	Perchlorate		SW6860	0.4		0.050	0.0070	12/21/2010
MW-114M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/12/2011
MW-114M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/12/2011
MW-114M1	N	Perchlorate		SW6860	0.4		0.050	0.0070	04/12/2011
MW-114M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.34		0.22	0.036	12/23/2010
MW-114M1	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	12/23/2010
MW-114M1	N	ND for 18 Explosives		SW8330	ND	UJ	ND	ND	12/23/2010
MW-114M1	N	Perchlorate		SW6860	0.68		0.050	0.0070	12/23/2010
MW-114M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/12/2011
MW-114M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/12/2011
MW-114M2	N	Perchlorate		SW6860	0.7		0.050	0.0070	04/12/2011
MW-114M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/23/2010
MW-114M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/23/2010
MW-114M2	N	Perchlorate		SW6860	0.65		0.050	0.0070	12/23/2010

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-129M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	05/03/2011
MW-129M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	05/03/2011
MW-129M1	N	Perchlorate		SW6860	0.1		0.050	0.0070	05/03/2011
MW-129M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	05/03/2011
MW-129M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	05/03/2011
MW-129M2	N	Perchlorate		SW6860	0.071		0.050	0.0070	05/03/2011
MW-129M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/27/2010
MW-129M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/27/2010
MW-129M2	N	Perchlorate		SW6860	0.061		0.050	0.0070	12/27/2010
MW-129M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	05/03/2011
MW-129M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	05/03/2011
MW-129M3	N	Perchlorate		SW6860	0.23		0.050	0.0070	05/03/2011
MW-139M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/28/2011
MW-139M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/28/2011
MW-139M1	N	Perchlorate		SW6860	0.015	J	0.050	0.0070	04/28/2011
MW-139M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/28/2011
MW-139M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/28/2011
MW-139M2	N	Perchlorate		SW6860	1.1		0.050	0.0070	04/28/2011
MW-139M2	FD	Perchlorate		SW6860	1		0.050	0.0070	04/28/2011
MW-139M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/27/2010
MW-139M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/27/2010
MW-139M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/28/2011
MW-139M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/28/2011
MW-139M3	N	Perchlorate		SW6860	0.12		0.050	0.0070	04/28/2011
MW-162M2	N	Perchlorate		SW6860	0.046	J	0.050	0.0070	04/18/2011
MW-165M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/19/2011
MW-165M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
MW-165M1	N	Perchlorate		SW6860	0.015	J	0.050	0.0070	04/19/2011
MW-165M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/19/2011
MW-165M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
MW-165M2	N	Perchlorate		SW6860	0.23		0.050	0.0070	04/19/2011
MW-165M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/23/2010
MW-165M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/23/2010
MW-165M2	N	Perchlorate		SW6860	0.28		0.050	0.0070	12/23/2010
MW-165M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
MW-165M3	N	Perchlorate		SW6860	0.027	J	0.050	0.0070	04/19/2011
MW-172M1	N	Perchlorate		SW6860	0.025	J	0.050	0.0070	04/27/2011
MW-172M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/27/2011

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-172M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/27/2011
MW-172M2	N	Perchlorate		SW6860	0.12		0.050	0.0070	04/27/2011
MW-172M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/27/2011
MW-172M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/27/2011
MW-172M3	N	Perchlorate		SW6860	0.097		0.050	0.0070	04/27/2011
MW-19S	N	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.35		0.22	0.10	04/18/2011
MW-19S	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.28		0.22	0.088	04/18/2011
MW-19S	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	3.6		0.22	0.088	04/18/2011
MW-19S	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	12.3		1.1	0.18	04/18/2011
MW-19S	N	2,4,6-Trinitrotoluene	TNT	SW8330	0.17	J	0.22	0.084	04/18/2011
MW-19S	N	ND for 14 explosives		SW8330	ND	U	ND	ND	04/18/2011
MW-19S	N	ND for 14 explosives		SW8330	ND	UJ	ND	ND	04/18/2011
MW-19S	N	Perchlorate		SW6860	0.29		0.050	0.0070	04/18/2011
MW-19S	N	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.27		0.21	0.095	12/22/2010
MW-19S	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.24		0.21	0.083	12/22/2010
MW-19S	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	6.2		0.21	0.083	12/22/2010
MW-19S	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	6.3		0.21	0.035	12/22/2010
MW-19S	N	2,4,6-Trinitrotoluene	TNT	SW8330	0.45		0.21	0.080	12/22/2010
MW-19S	N	ND for 14 explosives		SW8330	ND	U	ND	ND	12/22/2010
MW-19S	N	ND for 14 explosives		SW8330	ND	UJ	ND	ND	12/22/2010
MW-210M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/19/2011
MW-210M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
MW-210M1	N	Perchlorate		SW6860	0.29		0.050	0.0070	04/19/2011
MW-210M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
MW-210M2	N	Perchlorate		SW6860	2.8		0.050	0.0070	04/19/2011
MW-210M2	FD	Perchlorate		SW6860	2.8		0.050	0.0070	04/19/2011
MW-210M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/23/2010
MW-210M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/23/2010
MW-210M2	N	Perchlorate		SW6860	3.5		0.050	0.0070	12/23/2010
MW-210M2	FD	Perchlorate		SW6860	3.5		0.050	0.0070	12/23/2010
MW-210M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/19/2011
MW-210M3	N	Perchlorate		SW6860	0.031	J	0.050	0.0070	04/19/2011
MW-211M1	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	0.91		0.22	0.086	04/26/2011
MW-211M1	FD	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	0.79		0.21	0.084	04/26/2011
MW-211M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	14.9		1.1	0.18	04/26/2011
MW-211M1	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	14.3		1.1	0.18	04/26/2011
MW-211M1	N	ND for 17 Explosives		SW8330	ND	U	ND	ND	04/26/2011

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-211M1	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	04/26/2011
MW-211M1	FD	ND for 17 Explosives		SW8330	ND	U	ND	ND	04/26/2011
MW-211M1	FD	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	04/26/2011
MW-211M1	N	Perchlorate		SW6860	60.2		5.0	0.67	04/26/2011
MW-211M1	FD	Perchlorate		SW6860	59.8		5.0	0.67	04/26/2011
MW-211M1	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	0.91		0.22	0.086	12/21/2010
MW-211M1	FD	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	0.86		0.21	0.083	12/21/2010
MW-211M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	21.8		1.1	0.18	12/21/2010
MW-211M1	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	20.4		1.1	0.18	12/21/2010
MW-211M1	N	ND for 17 Explosives		SW8330	ND	U	ND	ND	12/21/2010
MW-211M1	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	12/21/2010
MW-211M1	FD	ND for 17 Explosives		SW8330	ND	U	ND	ND	12/21/2010
MW-211M1	FD	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	12/21/2010
MW-211M1	N	Perchlorate		SW6860	64.8		5.0	0.67	12/21/2010
MW-211M1	FD	Perchlorate		SW6860	62.8		5.0	0.67	12/21/2010
MW-211M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/26/2011
MW-211M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/26/2011
MW-211M2	N	Perchlorate		SW6860	0.031	J	0.050	0.0070	04/26/2011
MW-211M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/21/2010
MW-211M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/21/2010
MW-211M2	N	Perchlorate		SW6860	0.022	J	0.050	0.0070	12/21/2010
MW-211M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/26/2011
MW-211M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/26/2011
MW-211M3	N	Perchlorate		SW6860	0.042	J	0.050	0.0070	04/26/2011
MW-214M2	N	ND for Perchlorate		SW6860	ND	U	ND	ND	04/12/2011
MW-225M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	08/24/2011
MW-225M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	08/24/2011
MW-225M2	N	ND for Perchlorate		SW6860	ND	U	ND	ND	08/24/2011
MW-225M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/21/2011
MW-225M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/21/2011
MW-225M2	N	ND for Perchlorate		SW6860	ND	U	ND	ND	04/21/2011
MW-225M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/21/2010
MW-225M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/21/2010
MW-225M2	N	ND for Perchlorate		SW6860	ND	U	ND	ND	12/21/2010
MW-225M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	08/24/2011
MW-225M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	08/24/2011
MW-225M3	N	Perchlorate		SW6860	0.072		0.050	0.0070	08/24/2011
MW-225M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/21/2011

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Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-225M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/21/2011
MW-225M3	N	Perchlorate		SW6860	0.065		0.050	0.0070	04/21/2011
MW-225M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/21/2010
MW-225M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/21/2010
MW-225M3	N	Perchlorate		SW6860	0.17		0.050	0.0070	12/21/2010
MW-231M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/21/2011
MW-231M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/21/2011
MW-231M2	N	Perchlorate		SW6860	0.16		0.050	0.0070	04/21/2011
MW-231M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/21/2011
MW-231M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/21/2011
MW-231M3	N	Perchlorate		SW6860	0.033	J	0.050	0.0070	04/21/2011
MW-240M1	N	Perchlorate		SW6860	0.023	J	0.050	0.0070	04/21/2011
MW-240M2	N	Perchlorate		SW6860	0.1		0.050	0.0070	04/21/2011
MW-240M3	N	Perchlorate		SW6860	0.022	J	0.050	0.0070	04/21/2011
MW-248M2	N	Perchlorate		SW6860	0.15		0.050	0.0070	04/21/2011
MW-248M3	N	Perchlorate		SW6860	0.11		0.050	0.0070	04/21/2011
MW-252M1	N	Perchlorate		SW6860	0.052		0.050	0.0070	04/26/2011
MW-252M2	N	Perchlorate		SW6860	0.064		0.050	0.0070	04/26/2011
MW-252M3	N	Perchlorate		SW6860	0.084		0.050	0.0070	04/26/2011
MW-255M2	N	Perchlorate		SW6860	0.086		0.050	0.0070	04/26/2011
MW-258M1	N	Perchlorate		SW6860	3.3		0.050	0.0070	08/22/2011
MW-258M1	N	Perchlorate		SW6860	1.5		0.050	0.0070	04/14/2011
MW-258M1	N	Perchlorate		SW6860	1.1		0.050	0.0070	12/22/2010
MW-258M2	N	Perchlorate		SW6860	0.12		0.050	0.0070	08/22/2011
MW-258M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/14/2011
MW-258M2	N	Perchlorate		SW6860	0.15		0.050	0.0070	04/14/2011
MW-258M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/22/2010
MW-258M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/22/2010
MW-258M2	N	Perchlorate		SW6860	0.2		0.050	0.0070	12/22/2010
MW-258M3	N	Perchlorate		SW6860	0.069		0.050	0.0070	08/22/2011
MW-258M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/14/2011
MW-258M3	N	Perchlorate		SW6860	0.056		0.050	0.0070	04/14/2011
MW-258M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/22/2010
MW-258M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/22/2010
MW-258M3	N	Perchlorate		SW6860	0.051		0.050	0.0070	12/22/2010
MW-31M	N	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.3		0.22	0.098	04/18/2011
MW-31M	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.25		0.22	0.086	04/18/2011
MW-31M	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	4.1		0.22	0.086	04/18/2011

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-31M	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	6.9		0.22	0.036	04/18/2011
MW-31M	N	ND for 15 Exsplosives		SW8330	ND	U	ND	ND	04/18/2011
MW-31M	N	ND for 15 Exsplosives		SW8330	ND	UJ	ND	ND	04/18/2011
MW-31M	N	Perchlorate		SW6860	0.46		0.050	0.0070	04/18/2011
MW-31M	N	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.32		0.21	0.094	12/21/2010
MW-31M	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.25		0.21	0.083	12/21/2010
MW-31M	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	3.7		0.21	0.083	12/21/2010
MW-31M	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	4.6		0.21	0.035	12/21/2010
MW-31M	N	ND for 15 Exsplosives		SW8330	ND	U	ND	ND	12/21/2010
MW-31M	N	ND for 15 Exsplosives		SW8330	ND	UJ	ND	ND	12/21/2010
MW-31M	N	Perchlorate		SW6860	0.43		0.050	0.0070	12/21/2010
MW-31S	N	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.79		0.24	0.11	04/18/2011
MW-31S	FD	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.8		0.22	0.098	04/18/2011
MW-31S	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.3		0.24	0.093	04/18/2011
MW-31S	FD	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.32		0.22	0.086	04/18/2011
MW-31S	N	2,4-Dinitrotoluene	DNT24	SW8330	0.23	J	0.24	0.057	04/18/2011
MW-31S	FD	2,4-Dinitrotoluene	DNT24	SW8330	0.2	J	0.22	0.052	04/18/2011
MW-31S	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	2		0.24	0.093	04/18/2011
MW-31S	FD	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	1.9		0.22	0.086	04/18/2011
MW-31S	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	3.1		0.24	0.039	04/18/2011
MW-31S	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	2.5		0.22	0.036	04/18/2011
MW-31S	N	2,4,6-Trinitrotoluene	TNT	SW8330	1.9		0.24	0.089	04/18/2011
MW-31S	FD	2,4,6-Trinitrotoluene	TNT	SW8330	2.1		0.22	0.083	04/18/2011
MW-31S	N	ND for 13 Explosives		SW8330	ND	U	ND	ND	04/18/2011
MW-31S	N	ND for 13 Explosives		SW8330	ND	UJ	ND	ND	04/18/2011
MW-31S	FD	ND for 13 Explosives		SW8330	ND	U	ND	ND	04/18/2011
MW-31S	FD	ND for 13 Explosives		SW8330	ND	UJ	ND	ND	04/18/2011
MW-31S	N	Perchlorate		SW6860	0.3		0.050	0.0070	04/18/2011
MW-31S	N	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.94		0.21	0.094	12/21/2010
MW-31S	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.38		0.21	0.083	12/21/2010
MW-31S	N	2,4-Dinitrotoluene	DNT24	SW8330	0.29		0.21	0.050	12/21/2010
MW-31S	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	2.2		0.21	0.083	12/21/2010
MW-31S	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	4.4		0.21	0.035	12/21/2010
MW-31S	N	2,4,6-Trinitrotoluene	TNT	SW8330	2.2		0.21	0.079	12/21/2010
MW-31S	N	ND for 13 Explosives		SW8330	ND	U	ND	ND	12/21/2010
MW-31S	N	ND for 13 Explosives		SW8330	ND	UJ	ND	ND	12/21/2010

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-31S	N	Perchlorate		SW6860	0.65		0.050	0.0070	12/21/2010
MW-32D	N	Perchlorate		SW6860	0.27		0.050	0.0070	04/27/2011
MW-32M	N	Perchlorate		SW6860	0.18		0.050	0.0070	04/28/2011
MW-32S	N	Perchlorate		SW6860	0.04	J	0.050	0.0070	04/27/2011
MW-33D	N	ND for Perchlorate		SW6860	ND	U	ND	ND	04/27/2011
MW-33M	N	ND for Perchlorate		SW6860	ND	U	ND	ND	04/27/2011
MW-33S	N	Perchlorate		SW6860	0.045	J	0.050	0.0070	04/27/2011
MW-341M1	N	ND for Perchlorate		SW6860	ND	U	ND	ND	04/13/2011
MW-341M2	N	Perchlorate		SW6860	0.64		0.050	0.0070	04/14/2011
MW-341M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/14/2011
MW-341M3	N	Perchlorate		SW6860	0.98		0.050	0.0070	04/14/2011
MW-341M3	N	Perchlorate		SW6860	1.6		0.050	0.0070	12/28/2010
MW-341M4	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/14/2011
MW-341M4	N	Perchlorate		SW6860	0.17		0.050	0.0070	04/14/2011
MW-34M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/28/2011
MW-34M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/28/2011
MW-34M1	N	Perchlorate		SW6860	3		0.050	0.0070	04/28/2011
MW-34M1	FD	Perchlorate		SW6860	3		0.050	0.0070	04/28/2011
MW-34M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/28/2011
MW-34M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/28/2011
MW-34M2	N	Perchlorate		SW6860	0.75		0.050	0.0070	04/28/2011
MW-34M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	05/03/2011
MW-34M3	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	05/03/2011
MW-34M3	N	Perchlorate		SW6860	0.027	J	0.050	0.0070	05/03/2011
MW-352M1	N	Perchlorate		SW6860	0.13		0.050	0.0070	04/15/2011
MW-352M1	N	Perchlorate		SW6860	0.14		0.050	0.0070	12/28/2010
MW-352M2	N	ND for Perchlorate		SW6860	ND	U	ND	ND	04/15/2011
MW-352M2	N	ND for Perchlorate		SW6860	ND	U	ND	ND	12/28/2010
MW-352M3	N	ND for Perchlorate		SW6860	ND	U	ND	ND	04/15/2011
MW-352M3	N	ND for Perchlorate		SW6860	ND	U	ND	ND	12/28/2010
MW-353M1	N	Perchlorate		SW6860	0.12		0.050	0.0070	04/15/2011
MW-353M1	N	Perchlorate		SW6860	0.16		0.050	0.0070	12/29/2010
MW-353M2	N	ND for Perchlorate		SW6860	ND	U	ND	ND	04/15/2011
MW-353M2	N	ND for Perchlorate		SW6860	ND	U	ND	ND	12/29/2010
MW-353M3	N	ND for Perchlorate		SW6860	ND	U	ND	ND	04/15/2011
MW-353M3	N	ND for Perchlorate		SW6860	ND	U	ND	ND	12/29/2010
MW-35M2	N	Perchlorate		SW6860	0.033	J	0.050	0.0070	04/26/2011
MW-36M1	N	Perchlorate		SW6860	1.8		0.050	0.0070	04/12/2011

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-36M1	FD	Perchlorate		SW6860	1.8		0.050	0.0070	04/12/2011
MW-36M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/12/2011
MW-36M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/12/2011
MW-36M2	N	Perchlorate		SW6860	1.7		0.050	0.0070	04/12/2011
MW-531M1	N	Perchlorate		SW6860	0.3		0.050	0.0070	04/14/2011
MW-531M1	N	Perchlorate		SW6860	0.31		0.050	0.0070	12/22/2010
MW-532M1	N	Perchlorate		SW6860	8.6		0.050	0.0070	08/22/2011
MW-532M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.37	J	0.21	0.035	04/14/2011
MW-532M1	N	ND for 18 Explosives		SW8330	ND	UJ	ND	ND	04/14/2011
MW-532M1	N	Perchlorate		SW6860	6.4		0.050	0.0070	04/14/2011
MW-532M1	FD	Perchlorate		SW6860	6.5		0.050	0.0070	04/14/2011
MW-532M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.18	J	0.22	0.037	12/30/2010
MW-532M1	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	12/30/2010
MW-532M1	N	ND for 18 Explosives		SW8330	ND	UJ	ND	ND	12/30/2010
MW-532M1	N	Perchlorate		SW6860	5.9		0.50	0.067	12/30/2010
MW-532M1	FD	Perchlorate		SW6860	5.9		0.50	0.067	12/30/2010
MW-532M2	N	Perchlorate		SW6860	16.3		0.50	0.067	08/22/2011
MW-532M2	FD	Perchlorate		SW6860	16		0.50	0.067	08/22/2011
MW-532M2	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.53		0.22	0.037	04/14/2011
MW-532M2	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	04/14/2011
MW-532M2	N	ND for 18 Explosives		SW8330	ND	UJ	ND	ND	04/14/2011
MW-532M2	N	Perchlorate		SW6860	16.8		0.50	0.067	04/14/2011
MW-532M2	FD	Perchlorate		SW6860	16.8		0.50	0.067	04/14/2011
MW-532M2	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.83		0.22	0.036	12/30/2010
MW-532M2	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	12/30/2010
MW-532M2	N	ND for 18 Explosives		SW8330	ND	UJ	ND	ND	12/30/2010
MW-532M2	N	Perchlorate		SW6860	21.2		0.50	0.067	12/30/2010
MW-532M2	FD	Perchlorate		SW6860	21.3		0.50	0.067	12/30/2010
MW-533M1	N	Perchlorate		SW6860	0.17		0.050	0.0070	04/14/2011
MW-533M1	N	Perchlorate		SW6860	0.16		0.050	0.0070	12/22/2010
MW-542M1	N	Perchlorate		SW6860	0.19		0.050	0.0070	04/14/2011
MW-542M1	N	Perchlorate		SW6860	0.28		0.050	0.0070	12/30/2010
MW-543M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	06/23/2011
MW-543M1	N	Perchlorate		SW6850	0.11	J	0.20	0.015	06/23/2011
MW-543M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	11/30/2010
MW-543M1	N	Perchlorate		SW6850	0.078	J	0.20	0.040	11/30/2010
MW-543M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	06/23/2011
MW-543M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	06/23/2011

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Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-543M2	N	Perchlorate		SW6850	0.15	J	0.20	0.015	06/23/2011
MW-543M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/01/2010
MW-543M2	N	Perchlorate		SW6850	0.12	J	0.20	0.040	12/01/2010
MW-544M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.25	J	0.20	0.023	07/20/2011
MW-544M1	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.26	J	0.20	0.023	07/20/2011
MW-544M1	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	07/20/2011
MW-544M1	FD	ND for 18 Explosives		SW8330	ND	U	ND	ND	07/20/2011
MW-544M1	N	Perchlorate		SW6850	4.1		0.20	0.015	07/20/2011
MW-544M1	FD	Perchlorate		SW6850	3.4		0.20	0.015	07/20/2011
MW-544M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	06/21/2011
MW-544M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	06/21/2011
MW-544M1	N	Perchlorate		SW6850	5.8		0.20	0.015	06/21/2011
MW-544M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/13/2010
MW-544M1	N	Perchlorate		SW6850	0.78		0.20	0.040	12/13/2010
MW-544M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	06/22/2011
MW-544M2	N	Perchlorate		SW6850	0.11	J	0.20	0.015	06/22/2011
MW-544M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/10/2010
MW-544M2	N	Perchlorate		SW6850	0.3		0.20	0.040	12/10/2010
MW-544M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	06/21/2011
MW-544M3	N	Perchlorate		SW6850	0.072	J	0.20	0.015	06/21/2011
MW-544M3	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/09/2010
MW-544M3	N	Perchlorate		SW6850	0.16	J	0.20	0.040	12/09/2010
MW-545M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.37	J	0.20	0.023	06/20/2011
MW-545M1	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	06/20/2011
MW-545M1	N	Perchlorate		SW6850	4.2		0.20	0.015	06/20/2011
MW-545M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/07/2010
MW-545M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/07/2010
MW-545M1	N	Perchlorate		SW6850	0.87		0.20	0.040	12/07/2010
MW-545M2	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.5		0.20	0.023	06/16/2011
MW-545M2	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	06/16/2011
MW-545M2	N	Perchlorate		SW6850	7.1		0.20	0.015	06/16/2011
MW-545M2	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	1.1	J	0.20	0.037	12/07/2010
MW-545M2	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	1.1	J	0.20	0.037	12/07/2010
MW-545M2	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	12/07/2010
MW-545M2	FD	ND for 18 Explosives		SW8330	ND	U	ND	ND	12/07/2010
MW-545M2	N	Perchlorate		SW6850	12.2		0.40	0.080	12/07/2010
MW-545M2	FD	Perchlorate		SW6850	12		0.40	0.080	12/07/2010
MW-545M3	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.59	J	0.20	0.023	06/16/2011

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-545M3	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.58	J	0.20	0.023	06/16/2011
MW-545M3	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	06/16/2011
MW-545M3	FD	ND for 18 Explosives		SW8330	ND	U	ND	ND	06/16/2011
MW-545M3	N	Perchlorate		SW6850	7		0.20	0.015	06/16/2011
MW-545M3	FD	Perchlorate		SW6850	7.1		0.20	0.015	06/16/2011
MW-545M3	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.85	J	0.20	0.037	12/06/2010
MW-545M3	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	12/06/2010
MW-545M3	N	Perchlorate		SW6850	9		0.40	0.080	12/06/2010
MW-545M4	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	06/16/2011
MW-545M4	N	Perchlorate		SW6850	2.5		0.20	0.015	06/16/2011
MW-545M4	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/08/2010
MW-545M4	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	12/08/2010
MW-545M4	N	Perchlorate		SW6850	2.9		0.20	0.040	12/08/2010
MW-546M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	06/20/2011
MW-546M1	N	Perchlorate		SW6850	0.27		0.20	0.015	06/20/2011
MW-546M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/13/2010
MW-546M1	N	Perchlorate		SW6850	0.19	J	0.20	0.040	12/13/2010
MW-546M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	06/20/2011
MW-546M2	N	Perchlorate		SW6850	0.19	J	0.20	0.015	06/20/2011
MW-546M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	12/13/2010
MW-546M2	N	Perchlorate		SW6850	0.17	J	0.20	0.040	12/13/2010
MW-554M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.32	J	0.20	0.023	06/29/2011
MW-554M1	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	06/29/2011
MW-554M1	N	Perchlorate		SW6850	5.4		0.20	0.015	06/29/2011
MW-554M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.25	J	0.20	0.023	05/20/2011
MW-554M1	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	05/20/2011
MW-554M1	N	Perchlorate		SW6850	5.1		0.20	0.015	05/20/2011
MW-554M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	06/29/2011
MW-554M2	N	Perchlorate		SW6850	2.7		0.20	0.015	06/29/2011
MW-554M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	05/20/2011
MW-554M2	N	Perchlorate		SW6850	3		0.20	0.015	05/20/2011
MW-73S	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	0.72		0.21	0.084	04/18/2011
MW-73S	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	2.4		0.21	0.035	04/18/2011
MW-73S	N	ND for 17 Explosives		SW8330	ND	U	ND	ND	04/18/2011
MW-73S	N	ND for 17 Explosives		SW8330	ND	UJ	ND	ND	04/18/2011
MW-73S	N	Perchlorate		SW6860	0.55		0.050	0.0070	04/18/2011
MW-73S	N	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.15	J	0.21	0.094	12/22/2010
MW-73S	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.23		0.21	0.083	12/22/2010

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-73S	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	2.9		0.21	0.083	12/22/2010
MW-73S	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	3.5		0.21	0.035	12/22/2010
MW-73S	N	ND for 15 Exsplosives		SW8330	ND	U	ND	ND	12/22/2010
MW-73S	N	ND for 15 Exsplosives		SW8330	ND	UJ	ND	ND	12/22/2010
MW-73S	N	Perchlorate		SW6860	0.09		0.050	0.0070	12/22/2010
MW-74M2	N	Perchlorate		SW6860	0.25		0.050	0.0070	04/18/2011
MW-75M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/18/2011
MW-75M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/18/2011
MW-75M1	N	Perchlorate		SW6860	0.12		0.050	0.0070	04/18/2011
MW-75M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/18/2011
MW-75M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/18/2011
MW-75M2	N	Perchlorate		SW6860	0.51		0.050	0.0070	04/18/2011
MW-76M1	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.078	J	0.11	0.043	04/20/2011
MW-76M1	FD	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.045	J	0.11	0.042	04/20/2011
MW-76M1	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	2.7		0.11	0.043	04/20/2011
MW-76M1	FD	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	2.8		0.11	0.042	04/20/2011
MW-76M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	3.6		0.11	0.018	04/20/2011
MW-76M1	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	3.6		0.11	0.018	04/20/2011
MW-76M1	N	ND for 16 Explosives		SW8330	ND	U	ND	ND	04/20/2011
MW-76M1	N	ND for 16 Explosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-76M1	FD	ND for 16 Explosives		SW8330	ND	U	ND	ND	04/20/2011
MW-76M1	FD	ND for 16 Explosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-76M1	N	Perchlorate		SW6860	0.3		0.050	0.0070	04/20/2011
MW-76M1	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.096	J	0.21	0.083	12/22/2010
MW-76M1	FD	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.12	J	0.24	0.093	12/22/2010
MW-76M1	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	9.8		1.1	0.42	12/22/2010
MW-76M1	FD	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	10.1		1.2	0.47	12/22/2010
MW-76M1	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	13.7		1.1	0.18	12/22/2010
MW-76M1	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	13.9		1.2	0.20	12/22/2010
MW-76M1	N	ND for 16 Explosives		SW8330	ND	U	ND	ND	12/22/2010
MW-76M1	N	ND for 16 Explosives		SW8330	ND	UJ	ND	ND	12/22/2010
MW-76M1	FD	ND for 16 Explosives		SW8330	ND	U	ND	ND	12/22/2010
MW-76M1	FD	ND for 16 Explosives		SW8330	ND	UJ	ND	ND	12/22/2010
MW-76M1	N	Perchlorate		SW6860	1.1		0.050	0.0070	12/22/2010
MW-76M2	FD	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.053	J	0.11	0.048	04/20/2011
MW-76M2	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.14		0.11	0.043	04/20/2011

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-76M2	FD	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.14		0.11	0.042	04/20/2011
MW-76M2	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	4.5		0.54	0.21	04/20/2011
MW-76M2	FD	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	4.8	J	0.53	0.21	04/20/2011
MW-76M2	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	5.8		0.54	0.089	04/20/2011
MW-76M2	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	6	J	0.53	0.088	04/20/2011
MW-76M2	N	ND for 16 Explosives		SW8330	ND	U	ND	ND	04/20/2011
MW-76M2	N	ND for 16 Explosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-76M2	FD	ND for 15 Exsplosives		SW8330	ND	U	ND	ND	04/20/2011
MW-76M2	FD	ND for 15 Exsplosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-76M2	N	Perchlorate		SW6860	0.92		0.050	0.0070	04/20/2011
MW-76M2	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.31		0.22	0.085	12/22/2010
MW-76M2	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	10.4		1.1	0.43	12/22/2010
MW-76M2	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	13.7		1.1	0.18	12/22/2010
MW-76M2	N	ND for 16 Explosives		SW8330	ND	U	ND	ND	12/22/2010
MW-76M2	N	ND for 16 Explosives		SW8330	ND	UJ	ND	ND	12/22/2010
MW-76M2	N	Perchlorate		SW6860	1.1		0.050	0.0070	12/22/2010
MW-76S	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.29		0.10	0.017	04/20/2011
MW-76S	N	ND for 18 Explosives		SW8330	ND	U	ND	ND	04/20/2011
MW-76S	N	ND for 18 Explosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-76S	N	Perchlorate		SW6860	0.74		0.050	0.0070	04/20/2011
MW-77M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-77M1	N	Perchlorate		SW6860	0.08		0.050	0.0070	04/20/2011
MW-77M2	N	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.069	J	0.11	0.047	04/20/2011
MW-77M2	FD	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.067	J	0.11	0.047	04/20/2011
MW-77M2	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.13		0.11	0.042	04/20/2011
MW-77M2	FD	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.14	J	0.11	0.042	04/20/2011
MW-77M2	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	0.65		0.11	0.042	04/20/2011
MW-77M2	FD	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	0.6	J	0.11	0.042	04/20/2011
MW-77M2	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.65		0.11	0.018	04/20/2011
MW-77M2	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	0.67	J	0.11	0.018	04/20/2011
MW-77M2	N	ND for 15 Exsplosives		SW8330	ND	U	ND	ND	04/20/2011
MW-77M2	N	ND for 15 Exsplosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-77M2	FD	ND for 15 Exsplosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-77M2	N	Perchlorate		SW6860	0.32		0.050	0.0070	04/20/2011
MW-77M2	N	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.18	J	0.21	0.096	12/21/2010
MW-77M2	FD	2-Amino-4,6-Dinitrotoluene	A2DNT46	SW8330	0.18	J	0.21	0.094	12/21/2010

Table 5-3
Groundwater Monitoring Results - Perchlorate and Explosives: Complete Analysis

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Well	Sample Type	Analyte	Short Name	Test Method	Reported Result (ug/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-77M2	N	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.43		0.21	0.084	12/21/2010
MW-77M2	FD	4-Amino-2,6-Dinitrotoluene	A4DNT26	SW8330	0.37		0.21	0.083	12/21/2010
MW-77M2	N	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	HMX	SW8330	3.8		0.21	0.084	12/21/2010
MW-77M2	FD	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-	HMX	SW8330	3.9		0.21	0.083	12/21/2010
MW-77M2	N	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	4.9		0.21	0.035	12/21/2010
MW-77M2	FD	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	RDX	SW8330	5.1		0.21	0.035	12/21/2010
MW-77M2	N	ND for 15 Exsplosives		SW8330	ND	U	ND	ND	12/21/2010
MW-77M2	N	ND for 15 Exsplosives		SW8330	ND	UJ	ND	ND	12/21/2010
MW-77M2	FD	ND for 15 Exsplosives		SW8330	ND	U	ND	ND	12/21/2010
MW-77M2	FD	ND for 15 Exsplosives		SW8330	ND	UJ	ND	ND	12/21/2010
MW-77M2	N	Perchlorate		SW6860	0.48		0.050	0.0070	12/21/2010
MW-77S	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/20/2011
MW-77S	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-77S	N	Perchlorate		SW6860	0.027	J	0.050	0.0070	04/20/2011
MW-78M1	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/20/2011
MW-78M1	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-78M1	N	Perchlorate		SW6860	0.06		0.050	0.0070	04/20/2011
MW-78M2	N	ND for 19 Explosives		SW8330	ND	U	ND	ND	04/20/2011
MW-78M2	N	ND for 19 Explosives		SW8330	ND	UJ	ND	ND	04/20/2011
MW-78M2	N	Perchlorate		SW6860	0.6		0.050	0.0070	04/20/2011
XX9514	N	Perchlorate		SW6860	9.6		0.50	0.067	08/23/2011
XX9514	N	Perchlorate		SW6860	4.6		0.050	0.0070	04/15/2011
XX9514	FD	Perchlorate		SW6860	4.2		0.050	0.0070	04/15/2011
XX9514	N	Perchlorate		SW6860	3.9		0.050	0.0070	12/23/2010

Notes:

N - Normal Field Sample
FD - Field Duplicate
ND - Non-Detect
J - Estimated Concentration
U - Analyte not present at a concentration above the MDL
µg/L - Micrograms per liter

Table 5-4
Metals in Groundwater - Monitoring Wells MW-19S and MW-73S

Demolition Area 1-2011 Annual Report

Well	Filtered/Unfiltered	Sample Type	Analyte	Test Method	Reported Result (µg/L)	Qualifier	Reporting Limit (µg/L)	Method Detection Limit (µg/L)	Date
MW-19S	Filtered	N	Antimony	SW6020	0.49	J	1.0	0.11	04/18/2011
MW-19S	Filtered	N	Arsenic	SW6020	1.5		0.50	0.16	04/18/2011
MW-19S	Filtered	N	Barium	SW6020	75.9		0.50	0.078	04/18/2011
MW-19S	Filtered	N	Cadmium	SW6020	0.25	J	0.50	0.043	04/18/2011
MW-19S	Filtered	N	Calcium	SW6010B	130000		100	29.0	04/18/2011
MW-19S	Filtered	N	Cobalt	SW6020	0.20	J	0.50	0.024	04/18/2011
MW-19S	Filtered	N	Copper	SW6020	1.6	J	0.50	0.11	04/18/2011
MW-19S	Filtered	N	Magnesium	SW6010B	21000		100	39.0	04/18/2011
MW-19S	Filtered	N	ND for 1 Analytes	SW7470A	ND	U	ND	ND	04/18/2011
MW-19S	Filtered	N	ND for 7 Analytes	SW6020	ND	U	ND	ND	04/18/2011
MW-19S	Filtered	N	ND for 8 Analytes	SW6010B	ND	U	ND	ND	04/18/2011
MW-19S	Filtered	N	Nickel	SW6020	1.3		0.50	0.080	04/18/2011
MW-19S	Filtered	N	Potassium	SW6010B	3100		2500	880	04/18/2011
MW-19S	Filtered	N	Selenium	SW6020	9.5		1.0	0.27	04/18/2011
MW-19S	Filtered	N	Sodium	SW6010B	7800		2000	550	04/18/2011
MW-19S	Filtered	N	Vanadium	SW6020	0.13	J	0.50	0.11	04/18/2011
MW-19S	Unfiltered	N	Aluminum	SW6010B	150		100	30.0	04/18/2011
MW-19S	Unfiltered	N	Antimony	SW6020	0.86	J	1.0	0.11	04/18/2011
MW-19S	Unfiltered	N	Arsenic	SW6020	1.8		0.50	0.16	04/18/2011
MW-19S	Unfiltered	N	Barium	SW6020	79.7		0.50	0.078	04/18/2011
MW-19S	Unfiltered	N	Cadmium	SW6020	0.25	J	0.50	0.043	04/18/2011
MW-19S	Unfiltered	N	Calcium	SW6010B	120000		100	29.0	04/18/2011
MW-19S	Unfiltered	N	Cobalt	SW6020	0.25	J	0.50	0.024	04/18/2011
MW-19S	Unfiltered	N	Copper	SW6020	1.8		0.50	0.11	04/18/2011
MW-19S	Unfiltered	N	Iron	SW6010B	100		50.0	17.0	04/18/2011
MW-19S	Unfiltered	N	Lead	SW6020	0.33	J	0.50	0.17	04/18/2011
MW-19S	Unfiltered	N	Magnesium	SW6010B	20000		100	39.0	04/18/2011
MW-19S	Unfiltered	N	Mercury	SW7470A	0.016	J	0.20	0.012	04/18/2011
MW-19S	Unfiltered	N	ND for 4 Analytes	SW6010B	ND	U	ND	ND	04/18/2011
MW-19S	Unfiltered	N	ND for 6 Analytes	SW6020	ND	U	ND	ND	04/18/2011
MW-19S	Unfiltered	N	Nickel	SW6020	1.5		0.50	0.080	04/18/2011
MW-19S	Unfiltered	N	Potassium	SW6010B	3000		2500	880	04/18/2011
MW-19S	Unfiltered	N	Selenium	SW6020	10.0		1.0	0.27	04/18/2011
MW-19S	Unfiltered	N	Sodium	SW6010B	7300		2000	550	04/18/2011
MW-19S	Unfiltered	N	Vanadium	SW6020	0.35	J	0.50	0.11	04/18/2011
MW-73S	Filtered	N	Barium	SW6020	7.7		0.50	0.078	04/18/2011
MW-73S	Filtered	N	Calcium	SW6010B	8800		100	29.0	04/18/2011
MW-73S	Filtered	N	Cobalt	SW6020	0.050	J	0.50	0.024	04/18/2011
MW-73S	Filtered	N	Copper	SW6020	0.98	J	0.50	0.11	04/18/2011
MW-73S	Filtered	N	Magnesium	SW6010B	5800		100	39.0	04/18/2011
MW-73S	Filtered	N	ND for 2 Analytes	SW7470A	ND	U	ND	ND	04/18/2011
MW-73S	Filtered	N	ND for 5 Analytes	SW6010B	ND	U	ND	ND	04/18/2011
MW-73S	Filtered	N	ND for 9 Analytes	SW6020	ND	U	ND	ND	04/18/2011
MW-73S	Filtered	N	Selenium	SW6020	0.48	J	1.0	0.27	04/18/2011
MW-73S	Filtered	N	Sodium	SW6010B	2000		2000	550	04/18/2011
MW-73S	Filtered	N	Thallium	SW6020	0.030	J	0.50	0.028	04/18/2011
MW-73S	Unfiltered	N	Antimony	SW6020	0.17	J	1.0	0.11	04/18/2011
MW-73S	Unfiltered	N	Barium	SW6020	8.2		0.50	0.078	04/18/2011
MW-73S	Unfiltered	N	Calcium	SW6010B	9000		100	29.0	04/18/2011
MW-73S	Unfiltered	N	Cobalt	SW6020	0.070	J	0.50	0.024	04/18/2011
MW-73S	Unfiltered	N	Copper	SW6020	1.3		0.50	0.11	04/18/2011
MW-73S	Unfiltered	N	Iron	SW6010B	31.0	J	50.0	17.0	04/18/2011
MW-73S	Unfiltered	N	Lead	SW6020	0.20	J	0.50	0.17	04/18/2011
MW-73S	Unfiltered	N	Magnesium	SW6010B	5900		100	39.0	04/18/2011
MW-73S	Unfiltered	N	ND for 2 Analytes	SW7470A	ND	U	ND	ND	04/18/2011
MW-73S	Unfiltered	N	ND for 4 Analytes	SW6010B	ND	U	ND	ND	04/18/2011
MW-73S	Unfiltered	N	ND for 6 Analytes	SW6020	ND	U	ND	ND	04/18/2011
MW-73S	Unfiltered	N	Selenium	SW6020	0.44	J	1.0	0.27	04/18/2011
MW-73S	Unfiltered	N	Sodium	SW6010B	2100		2000	550	04/18/2011
MW-73S	Unfiltered	N	Thallium	SW6020	0.030	J	0.50	0.028	04/18/2011
MW-73S	Unfiltered	N	Zinc	SW6020	11.3		5.0	0.80	04/18/2011

Notes:

N - Normal Field Sample
ND - Non-Detect
J - Estimated Concentration
U - Analyte not present at a concentration above the MDL
µg/L - Micrograms per liter

Table 5-5

Perchlorate/RDX/HMX Profile Analytical Results - Leading Edge Investigation

Location	Elev (ft msl)	Sample Beginning Depth (ft)	Sample Ending Depth (ft)	Top Elev (ft msl)	Bottom Elev (ft msl)	Sample Type	Perchlorate	RDX	HMX	Date
DP-551	54.2	34	39	20.2	15.2	N	0.2	0.2 U	0.2 U	1/25/2011
DP-551	54.2	44	49	10.2	5.2	N	0.16 J	0.2 U	0.2 U	1/25/2011
DP-551	54.2	54	59	0.2	-4.8	N	0.17 J	0.2 U	0.2 U	1/25/2011
DP-551	54.2	64	69	-9.8	-14.8	N	0.16 J	0.2 U	0.2 U	1/25/2011
DP-551	54.2	74	79	-19.8	-24.8	N	0.1 J	0.2 U	0.2 U	1/25/2011
DP-551	54.2	84	89	-29.8	-34.8	N	0.1 J	0.2 U	0.2 U	1/25/2011
DP-551	54.2	94	99	-39.8	-44.8	N	0.085 J	0.2 U	0.2 U	1/25/2011
DP-551	54.2	104	109	-49.8	-54.8	N	0.089 J	0.2 U	0.2 U	1/26/2011
DP-552	53.39	34	39	19.39	14.39	N	0.2	0.2 U	0.2 U	1/26/2011
DP-552	53.39	44	49	9.39	4.39	N	0.21	0.2 U	0.2 U	1/26/2011
DP-552	53.39	54	59	-0.61	-5.61	N	0.19 J	0.2 U	0.2 U	1/26/2011
DP-552	53.39	64	69	-10.61	-15.61	N	0.12 J	0.2 U	0.2 U	1/26/2011
DP-552	53.39	74	79	-20.61	-25.61	N	0.14 J	0.2 U	0.2 U	1/27/2011
DP-552	53.39	84	89	-30.61	-35.61	N	0.094 J	0.2 U	0.2 U	1/27/2011
DP-552	53.39	94	99	-40.61	-45.61	FD	0.13 J	0.2 U	0.2 U	1/28/2011
DP-552	53.39	94	99	-40.61	-45.61	N	0.14 J	0.2 U	0.2 U	1/28/2011
DP-552	53.39	104	109	-50.61	-55.61	N	0.1 J	0.2 U	0.2 U	1/28/2011
DP-552	53.39	114	119	-60.61	-65.61	N	0.089 J	0.2 U	0.2 U	1/28/2011
DP-553	53.93	34	39	19.93	14.93	N	0.2	0.2 U	0.2 U	1/31/2011
DP-553	53.93	44	49	9.93	4.93	N	0.18 J	0.2 U	0.2 U	1/31/2011
DP-553	53.93	54	59	-0.07	-5.07	N	0.19 J	0.2 U	0.2 U	2/1/2011
DP-553	53.93	64	69	-10.07	-15.07	N	0.2	0.2 U	0.2 U	2/1/2011
DP-553	53.93	74	79	-20.07	-25.07	N	0.11 J	0.2 U	0.2 U	2/1/2011
DP-553	53.93	84	89	-30.07	-35.07	N	0.13 J	0.2 U	0.2 U	2/1/2011
DP-554	54.95	30	35	24.95	19.95	N	0.21	0.2 U	0.2 U	2/3/2011
DP-554	54.95	40	45	14.95	9.95	N	0.091 J	0.2 U	0.2 U	2/3/2011
DP-554	54.95	50	55	4.95	-0.05	N	0.15 J	0.2 U	0.2 U	2/4/2011
DP-554	54.95	60	65	-5.05	-10.05	FD	0.4	0.2 U	0.2 U	2/4/2011
DP-554	54.95	60	65	-5.05	-10.05	N	0.38	0.2 U	0.2 U	2/4/2011
DP-554	54.95	70	75	-15.05	-20.05	N	2.91	0.2 UJ	0.2 U	2/4/2011
DP-554	54.95	80	85	-25.05	-30.05	N	1.99	0.2 UJ	0.2 U	2/4/2011
DP-554	54.95	90	95	-35.05	-40.05	N	4.11	0.2 UJ	0.2 U	2/4/2011
DP-554	54.95	95	100	-40.05	-45.05	N	2.6	0.2 U	0.2 U	3/1/2011
DP-554	54.95	105	110	-50.05	-55.05	N	1.15	0.2 U	0.2 U	3/1/2011
DP-554	54.95	115	120	-60.05	-65.05	N	4.95	0.22	0.2 U	3/2/2011
DP-554	54.95	125	130	-70.05	-75.05	N	7.46	0.38	0.2 U	3/2/2011
DP-554	54.95	135	140	-80.05	-85.05	N	2.94	0.15 J	0.2 U	3/3/2011
DP-554	54.95	145	150	-90.05	-95.05	FD	1.41	0.2 U	0.2 U	3/3/2011
DP-554	54.95	145	150	-90.05	-95.05	N	1.42	0.2 U	0.2 U	3/3/2011
DP-554	54.95	155	160	-100.05	-105.05	N	2.09	0.2 U	0.2 U	3/3/2011
DP-554	54.95	165	170	-110.05	-115.05	N	1.61	0.2 U	0.2 U	3/4/2011
DP-554	54.95	175	180	-120.05	-125.05	N	1.34	0.2 U	0.2 U	3/4/2011
DP-554	54.95	185	190	-130.05	-135.05	N	0.43	0.2 U	0.2 U	3/4/2011

Table 5-5

Perchlorate/RDX/HMX Profile Analytical Results - Leading Edge Investigation

Location	Elev (ft msl)	Sample Beginning Depth (ft)	Sample Ending Depth (ft)	Top Elev (ft msl)	Bottom Elev (ft msl)	Sample Type	Perchlorate	RDX	HMX	Date
DP-554	54.95	190	195	-135.05	-140.05	N	0.27	0.2 U	0.2 U	3/7/2011
DP-555	51.3	25	28	26.3	23.3	N	0.15 J	0.2 U	0.2 U	2/9/2011
DP-555	51.3	35	38	16.3	13.3	N	0.31	0.2 U	0.2 U	2/9/2011
DP-555	51.3	45	48	6.3	3.3	N	0.098 J	0.2 U	0.2 U	2/10/2011
DP-555	51.3	55	58	-3.7	-6.7	N	0.095 J	0.2 U	0.2 U	2/10/2011
DP-555	51.3	65	68	-13.7	-16.7	N	1.12	0.2 U	0.2 U	2/10/2011
DP-555	51.3	75	78	-23.7	-26.7	N	0.9	0.2 U	0.2 U	2/10/2011
DP-555	51.3	85	88	-33.7	-36.7	N	0.58	0.2 U	0.2 U	2/10/2011
DP-555	51.3	95	98	-43.7	-46.7	FD	0.41	0.2 U	0.2 U	2/10/2011
DP-555	51.3	95	98	-43.7	-46.7	N	0.44	0.2 U	0.2 U	2/10/2011
DP-556	48.88	20	23	28.88	25.88	N	0.16 J	0.2 U	0.2 U	2/16/2011
DP-556	48.88	30	33	18.88	15.88	N	0.17 J	0.2 U	0.2 U	2/16/2011
DP-556	48.88	40	43	8.88	5.88	N	0.094 J	0.2 U	0.2 U	2/16/2011
DP-556	48.88	50	53	-1.12	-4.12	N	0.2	0.2 U	0.2 U	2/16/2011
DP-556	48.88	60	63	-11.12	-14.12	N	1.31	0.2 U	0.2 U	2/17/2011
DP-556	48.88	70	73	-21.12	-24.12	N	2.24	0.2 U	0.2 U	2/17/2011
DP-556	48.88	77	80	-28.12	-31.12	N	1.84	0.2 U	0.2 U	2/17/2011
DP-556	48.88	85	90	-36.12	-41.12	N	4.8	0.25	0.2 U	3/17/2011
DP-556	48.88	95	100	-46.12	-51.12	N	5.31	0.28	0.2 U	3/17/2011
DP-556	48.88	105	110	-56.12	-61.12	N	9.18	0.6	0.2 U	3/18/2011
DP-556	48.88	115	120	-66.12	-71.12	N	9.87	0.7	0.2 U	3/18/2011
DP-556	48.88	125	130	-76.12	-81.12	N	9.61	0.65	0.2 U	3/18/2011
DP-556	48.88	135	140	-86.12	-91.12	N	4.11	0.24	0.2 U	3/21/2011
DP-556	48.88	145	150	-96.12	-101.12	FD	4.65	0.37	0.2 U	3/21/2011
DP-556	48.88	145	150	-96.12	-101.12	N	4.86	0.35	0.2 U	3/21/2011
DP-556	48.88	155	160	-106.12	-111.12	N	4.35	0.28	0.2 U	3/21/2011
DP-556	48.88	165	170	-116.12	-121.12	N	2.77	0.13 J	0.2 U	3/22/2011
DP-556	48.88	175	180	-126.12	-131.12	N	0.14 J	0.2 U	0.2 U	3/22/2011
DP-556	48.88	185	190	-136.12	-141.12	N	0.097 J	0.2 U	0.2 U	3/23/2011
DP-557	53.65	30	33	23.65	20.65	N	0.11 J	0.2 U	0.2 U	2/18/2011
DP-557	53.65	40	43	13.65	10.65	N	0.053 J	0.2 U	0.2 U	2/18/2011
DP-557	53.65	50	53	3.65	0.65	FD	0.045 J	0.2 U	0.2 U	2/18/2011
DP-557	53.65	50	53	3.65	0.65	N	0.042 J	0.2 U	0.2 U	2/18/2011
DP-557	53.65	60	63	-6.35	-9.35	N	0.05 J	0.2 U	0.2 U	2/18/2011
DP-557	53.65	70	73	-16.35	-19.35	N	0.21	0.2 U	0.2 U	2/18/2011
DP-557	53.65	80	83	-26.35	-29.35	N	0.54	0.2 U	0.2 U	2/21/2011
DP-557	53.65	90	93	-36.35	-39.35	N	0.4	0.41 U	0.2 U	2/22/2011
DP-557	53.65	100	103	-46.35	-49.35	N	0.22	0.2 U	0.2 U	2/22/2011
DP-557	53.65	104.5	107.5	-50.85	-53.85	N	0.24	0.2 U	0.2 U	2/22/2011
DP-557	53.65	115	125	-61.35	-71.35	N	0.73	N/A	N/A	3/22/2011
DP-557	53.65	115	125	-61.35	-71.35	N	N/A	0.2 U	0.2 U	3/24/2011
DP-557	53.65	125	130	-71.35	-76.35	N	0.23	0.2 U	0.2 U	4/1/2011
DP-557	53.65	135	140	-81.35	-86.35	N	0.19 J	0.2 U	0.2 U	4/1/2011

Table 5-5

Perchlorate/RDX/HMX Profile Analytical Results - Leading Edge Investigation

Location	Elev (ft msl)	Sample Beginning Depth (ft)	Sample Ending Depth (ft)	Top Elev (ft msl)	Bottom Elev (ft msl)	Sample Type	Perchlorate	RDX	HMX	Date
DP-557	53.65	145	150	-91.35	-96.35	N	0.25	0.2 U	0.2 U	4/4/2011
DP-557	53.65	155	160	-101.35	-106.35	N	0.057 J	0.2 U	0.2 U	4/4/2011
DP-557	53.65	165	170	-111.35	-116.35	N	0.12 J	0.2 U	0.2 U	4/5/2011
DP-557	53.65	175	180	-121.35	-126.35	N	0.24	0.2 U	0.2 U	4/5/2011
DP-557	53.65	185	190	-131.35	-136.35	N	0.2	0.2 U	0.2 U	4/7/2011
DP-557	53.65	195	200	-141.35	-146.35	N	0.051 J	0.2 U	0.2 U	4/8/2011
DP-558	59.19	25	28	34.19	31.19	N	0.2 U	0.2 U	0.2 U	2/25/2011
DP-558	59.19	35	38	24.19	21.19	N	0.2 U	0.2 U	0.2 U	2/25/2011
DP-558	59.19	45	48	14.19	11.19	N	0.2 U	0.2 U	0.2 U	2/25/2011
DP-558	59.19	55	58	4.19	1.19	N	0.2 U	0.2 U	0.2 U	2/25/2011
DP-558	59.19	65	68	-5.81	-8.81	N	0.21	0.2 U	0.2 U	2/28/2011
DP-558	59.19	75	78	-15.81	-18.81	FD	0.31	0.2 U	0.2 U	2/28/2011
DP-558	59.19	75	78	-15.81	-18.81	N	0.31	0.2 U	0.2 U	2/28/2011
DP-558	59.19	81	84	-21.81	-24.81	N	0.19 J	0.2 U	0.2 U	2/28/2011
DP-558	59.19	83	88	-23.81	-28.81	N	0.76	0.2 U	0.2 U	4/26/2011
DP-558	59.19	93	98	-33.81	-38.81	N	4.08	0.24	0.2 U	4/26/2011
DP-558	59.19	103	108	-43.81	-48.81	N	3.61	0.27	0.2 U	4/28/2011
DP-558	59.19	113	118	-53.81	-58.81	N	5.63	0.35	0.2 U	4/28/2011
DP-558	59.19	123	128	-63.81	-68.81	N	7.81	0.61	0.2 U	4/28/2011
DP-558	59.19	133	138	-73.81	-78.81	N	9.88	0.84	0.2 U	4/29/2011
DP-558	59.19	143	148	-83.81	-88.81	N	4.28	0.29	0.2 U	4/29/2011
DP-558	59.19	153	158	-93.81	-98.81	FD	4.37	0.23	0.2 U	5/3/2011
DP-558	59.19	153	158	-93.81	-98.81	N	4.47	0.24	0.2 U	5/3/2011
DP-558	59.19	163	168	-103.81	-108.81	N	2.92	0.11 J	0.2 U	5/3/2011
DP-558	59.19	173	178	-113.81	-118.81	N	0.27	0.2 U	0.2 U	5/4/2011
DP-558	59.19	183	188	-123.81	-128.81	N	0.14 J	0.2 U	0.2 U	5/5/2011
MW-543	58.3	60	60	-1.7	-1.7	N	0.054 J	N/A	N/A	10/6/2010
MW-543	58.3	70	70	-11.7	-11.7	N	0.054 J	N/A	N/A	10/6/2010
MW-543	58.3	80	80	-21.7	-21.7	N	0.063 J	N/A	N/A	10/6/2010
MW-543	58.3	90	90	-31.7	-31.7	FD	0.11 J	N/A	N/A	10/6/2010
MW-543	58.3	90	90	-31.7	-31.7	N	0.11 J	N/A	N/A	10/6/2010
MW-543	58.3	100	100	-41.7	-41.7	N	0.12 J	N/A	N/A	10/6/2010
MW-543	58.3	110	110	-51.7	-51.7	N	0.088 J	N/A	N/A	10/6/2010
MW-543	58.3	120	120	-61.7	-61.7	N	0.085 J	N/A	N/A	10/7/2010
MW-543	58.3	130	130	-71.7	-71.7	N	0.087 J	N/A	N/A	10/7/2010
MW-543	58.3	140	140	-81.7	-81.7	N	0.1 J	N/A	N/A	10/7/2010
MW-544	73.7	70	70	3.7	3.7	N	0.11 J	N/A	N/A	10/1/2010
MW-544	73.7	80	80	-6.3	-6.3	FD	0.081 J	N/A	N/A	10/1/2010
MW-544	73.7	80	80	-6.3	-6.3	N	0.08 J	N/A	N/A	10/1/2010
MW-544	73.7	90	90	-16.3	-16.3	N	0.11 J	N/A	N/A	10/1/2010
MW-544	73.7	100	100	-26.3	-26.3	N	0.061 J	N/A	N/A	10/4/2010
MW-544	73.7	110	110	-36.3	-36.3	N	0.071 J	N/A	N/A	10/4/2010
MW-544	73.7	120	120	-46.3	-46.3	N	0.13 J	N/A	N/A	10/4/2010

Table 5-5

Perchlorate/RDX/HMX Profile Analytical Results - Leading Edge Investigation

Location	Elev (ft msl)	Sample Beginning Depth (ft)	Sample Ending Depth (ft)	Top Elev (ft msl)	Bottom Elev (ft msl)	Sample Type	Perchlorate	RDX	HMX	Date
MW-544	73.7	130	130	-56.3	-56.3	N	0.54	N/A	N/A	10/4/2010
MW-544	73.7	140	140	-66.3	-66.3	N	0.4	N/A	N/A	10/5/2010
MW-544	73.7	150	150	-76.3	-76.3	N	0.59	N/A	N/A	10/5/2010
MW-544	73.7	160	160	-86.3	-86.3	N	0.8	N/A	N/A	10/13/2010
MW-544	73.7	170	170	-96.3	-96.3	N	0.95	N/A	N/A	10/13/2010
MW-544	73.7	180	180	-106.3	-106.3	N	0.33	N/A	N/A	10/13/2010
MW-544	73.7	190	190	-116.3	-116.3	N	0.81	N/A	N/A	10/14/2010
MW-544	73.7	200	200	-126.3	-126.3	FD	0.35	N/A	N/A	10/19/2010
MW-544	73.7	200	200	-126.3	-126.3	N	0.35	N/A	N/A	10/19/2010
MW-545	62.8	62	64	0.8	-1.2	N	1.62	N/A	N/A	10/14/2010
MW-545	62.8	72	74	-9.2	-11.2	N	3.42	N/A	N/A	10/14/2010
MW-545	62.8	82	84	-19.2	-21.2	N	4.59	N/A	N/A	10/15/2010
MW-545	62.8	90	94	-27.2	-31.2	N	6.58	N/A	N/A	10/15/2010
MW-545	62.8	102	104	-39.2	-41.2	N	11.7	N/A	N/A	10/15/2010
MW-545	62.8	110	114	-47.2	-51.2	N	12.3	N/A	N/A	10/18/2010
MW-545	62.8	120	124	-57.2	-61.2	N	2.08	N/A	N/A	10/18/2010
MW-545	62.8	130	134	-67.2	-71.2	N	3.78	N/A	N/A	10/19/2010
MW-545	62.8	138	140	-75.2	-77.2	N	7.75	N/A	N/A	11/17/2010
MW-545	62.8	148	150	-85.2	-87.2	FD	11	N/A	N/A	11/17/2010
MW-545	62.8	148	150	-85.2	-87.2	N	10.7	N/A	N/A	11/17/2010
MW-545	62.8	158	160	-95.2	-97.2	N	0.95	N/A	N/A	11/17/2010
MW-545	62.8	168	170	-105.2	-107.2	N	0.87	N/A	N/A	11/18/2010
MW-545	62.8	178	180	-115.2	-117.2	N	0.87	N/A	N/A	11/18/2010
MW-545	62.8	188	190	-125.2	-127.2	N	0.053 J	N/A	N/A	11/18/2010
MW-546	62.8	58	60	4.8	2.8	N	0.068 J	N/A	N/A	10/22/2010
MW-546	62.8	68	70	-5.2	-7.2	N	0.11 J	N/A	N/A	10/22/2010
MW-546	62.8	78	80	-15.2	-17.2	N	0.17 J	N/A	N/A	10/22/2010
MW-546	62.8	86	90	-23.2	-27.2	N	0.14 J	N/A	N/A	10/22/2010
MW-546	62.8	98	100	-35.2	-37.2	N	0.14 J	N/A	N/A	10/22/2010
MW-546	62.8	108	110	-45.2	-47.2	N	0.21	N/A	N/A	10/25/2010
MW-546	62.8	128	130	-65.2	-67.2	N	0.2	N/A	N/A	11/22/2010
MW-546	62.8	138	140	-75.2	-77.2	N	0.19 J	N/A	N/A	11/22/2010
MW-546	62.8	148	150	-85.2	-87.2	N	0.19 J	N/A	N/A	11/23/2010
MW-546	62.8	158	160	-95.2	-97.2	N	0.18 J	N/A	N/A	11/23/2010
MW-546	62.8	168	170	-105.2	-107.2	N	0.11 J	N/A	N/A	11/23/2010
MW-546	62.8	178	180	-115.2	-117.2	N	0.13 J	N/A	N/A	11/24/2010
MW-546	62.8	188	190	-125.2	-127.2	N	0.13 J	N/A	N/A	11/24/2010
MW-559	51.82	35	39	16.82	12.82	N	0.069 J	0.2 U	0.2 U	5/10/2011
MW-559	51.82	45	49	6.82	2.82	N	0.27	0.2 U	0.2 U	5/10/2011
MW-559	51.82	55	59	-3.18	-7.18	N	0.26	0.2 U	0.2 U	5/11/2011
MW-559	51.82	65	69	-13.18	-17.18	N	0.22	0.2 U	0.2 U	5/11/2011
MW-559	51.82	75	79	-23.18	-27.18	N	0.27	0.2 U	0.2 U	5/11/2011
MW-559	51.82	85	89	-33.18	-37.18	N	1.54	0.2 U	0.2 U	5/12/2011

Table 5-5

Perchlorate/RDX/HMX Profile Analytical Results - Leading Edge Investigation

Location	Elev (ft msl)	Sample Beginning Depth (ft)	Sample Ending Depth (ft)	Top Elev (ft msl)	Bottom Elev (ft msl)	Sample Type	Perchlorate	RDX	HMX	Date
MW-559	51.82	95	99	-43.18	-47.18	N	0.92	0.2 U	0.2 U	5/12/2011
MW-559	51.82	125	129	-73.18	-77.18	N	1.33	0.2 U	0.2 U	5/13/2011
MW-559	51.82	135	139	-83.18	-87.18	FD	2.64	0.2 U	0.2 U	5/16/2011
MW-559	51.82	135	139	-83.18	-87.18	N	2.68	0.2 U	0.2 U	5/16/2011
MW-559	51.82	145	149	-93.18	-97.18	N	1.48	0.2 U	0.2 U	5/17/2011
MW-559	51.82	155	159	-103.18	-107.18	N	1.33	0.2 U	0.2 U	5/18/2011
MW-559	51.82	165	169	-113.18	-117.18	N	1.2	0.2 U	0.2 U	5/18/2011
MW-559	51.82	175	179	-123.18	-127.18	N	0.6	0.2 U	0.2 U	5/19/2011
MW-559	51.82	185	189	-133.18	-137.18	N	0.19 J	0.2 U	0.2 U	5/19/2011
MW-560	57.83	35	39	22.83	18.83	N	0.091 J	0.2 U	0.2 U	6/8/2011
MW-560	57.83	45	49	12.83	8.83	N	0.12 J	0.2 U	0.2 U	6/8/2011
MW-560	57.83	55	59	2.83	-1.17	N	0.11 J	0.2 U	0.2 U	6/8/2011
MW-560	57.83	65	69	-7.17	-11.17	N	0.13 J	0.2 U	0.2 U	6/8/2011
MW-560	57.83	75	79	-17.17	-21.17	N	0.12 J	0.2 U	0.2 U	6/8/2011
MW-560	57.83	85	89	-27.17	-31.17	N	0.13 J	0.2 U	0.2 U	6/9/2011
MW-560	57.83	95	99	-37.17	-41.17	N	0.12 J	0.2 U	0.2 U	6/9/2011
MW-560	57.83	105	109	-47.17	-51.17	N	0.098 J	0.2 U	0.2 U	6/9/2011
MW-560	57.83	115	119	-57.17	-61.17	FD	0.085 J	0.2 U	0.2 U	6/10/2011
MW-560	57.83	115	119	-57.17	-61.17	N	0.092 J	0.2 U	0.2 U	6/10/2011
MW-560	57.83	125	129	-67.17	-71.17	N	0.11 J	0.2 U	0.2 U	6/10/2011
MW-560	57.83	135	139	-77.17	-81.17	N	0.098 J	0.2 U	0.2 U	6/10/2011
MW-560	57.83	145	149	-87.17	-91.17	N	0.12 J	0.2 U	0.2 U	6/13/2011
MW-560	57.83	155	159	-97.17	-101.17	N	0.61	0.2 U	0.2 U	6/13/2011
MW-560	57.83	165	169	-107.17	-111.17	N	0.14 J	0.2 U	0.2 U	6/14/2011
MW-560	57.83	175	179	-117.17	-121.17	N	0.21	0.2 U	0.2 U	6/14/2011
MW-560	57.83	185	189	-127.17	-131.17	N	0.34	0.2 U	0.2 U	6/15/2011
MW-560	57.83	195	199	-137.17	-141.17	N	0.65	0.2 U	0.2 U	6/15/2011
MW-560	57.83	205	209	-147.17	-151.17	N	0.67	0.2 U	0.2 U	6/16/2011
MW-565	41.01	8.5	13	32.51	28.01	N	0.15 J	0.2 U	0.2 U	8/26/2011
MW-565	41.01	19	23.5	22.01	17.51	N	0.41	0.2 U	0.2 U	8/26/2011
MW-565	41.01	28	32.5	13.01	8.51	N	0.067 J	0.2 U	0.2 U	8/26/2011
MW-565	41.01	38	42.5	3.01	-1.49	N	0.2 U	0.2 U	0.2 U	8/29/2011
MW-565	41.01	47	50.5	-5.99	-9.49	N	0.1 J	0.2 U	0.2 U	8/29/2011
MW-565	41.01	58	60.5	-16.99	-19.49	N	0.11 J	0.2 U	0.2 U	8/29/2011
MW-565	41.01	69	73.5	-27.99	-32.49	N	0.16 J	0.2 U	0.2 U	8/29/2011
MW-565	41.01	78	80.5	-36.99	-39.49	FD	0.16 J	0.2 U	0.2 U	8/30/2011
MW-565	41.01	78	80.5	-36.99	-39.49	N	0.14 J	0.2 U	0.2 U	8/30/2011
MW-565	41.01	87	90	-45.99	-48.99	N	0.47	4.35 U	0.63 U	8/30/2011
MW-565	41.01	96	100	-54.99	-58.99	N	0.83	0.2 U	0.2 U	8/31/2011
MW-565	41.01	106	110	-64.99	-68.99	N	0.79	0.2 U	0.2 U	9/1/2011
MW-565	41.01	116	120	-74.99	-78.99	N	0.83	0.2 U	0.2 U	9/1/2011
MW-565	41.01	136	140	-94.99	-98.99	N	0.59	0.2 U	0.2 U	9/2/2011
MW-565	41.01	146	150	-104.99	-108.99	N	0.19 J	0.2 U	0.2 U	9/7/2011

Table 5-5

Perchlorate/RDX/HMX Profile Analytical Results - Leading Edge Investigation

Location	Elev (ft msl)	Sample Beginning Depth (ft)	Sample Ending Depth (ft)	Top Elev (ft msl)	Bottom Elev (ft msl)	Sample Type	Perchlorate	RDX	HMX	Date
MW-565	41.01	175	180	-133.99	-138.99	N	0.2 U	0.2 U	0.2 U	9/7/2011
MW-565	41.01	185	190	-143.99	-148.99	N	0.2 U	0.2 U	0.2 U	9/8/2011
MW-565	41.01	195	200	-153.99	-158.99	N	0.2 U	0.2 U	0.2 U	9/8/2011
MW-565	41.01	206	210	-164.99	-168.99	N	0.2 U	0.2 U	0.2 U	9/9/2011

Notes:

Elev. - Elevation
ft msl - Feet Mean Sea Level
ft - Feet
N - Normal sample
FD - Field Duplicate
J - Estimated Concentration
U - Non-Detect

Table 8-1
Wells in Proposed Hydraulic Monitoring Plan

Annual Environmental and System Performance Monitoring Plan
Demo 1 Groundwater Operable Unit

Well ID	Screen ID	Ground Elevation (ft bgs)	Top PVC or Steel Casing Elevation (ft NGVD)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Top of Screen Elevation (ft NGVD)	Bottom of Screen Elevation (ft NGVD)	Midscreen Elevation (ft NGVD)	Frequency of Measurements Per Year
Frank Perkins Road System									
D1-EW-1	NA	145	145.10	109	199	36.0	-54.0	-9.0	1
D1-EW-501	NA	148	147.15	88	188	60.0	-40.0	10.0	1
D1-EW-502	NA	138	149.92	88	188	50.0	-50.0	0.0	1
D1-EW-503	NA	178	175.22	148	228	30.0	-50.0	-10.0	1
D1-IW-1	NA	166	164.39	220	320	-54.0	-154.0	-104.0	1
D1-IW-5	NA	155	153.80	110	195	45.0	-40.0	2.5	1
MW-46	D	226	225.56	295	305	-69.0	-79.0	-74.0	1
	M1	226	225.56	262	272	-36.0	-46.0	-41.0	1
	M2	226	225.55	215	225	11.0	1.0	6.0	1
	M3	226	226.01	182	192	44.0	34.0	39.0	1
	S	226	226.06	154	164	72.0	62.0	67.0	1
MW-47	S	161	163.56	90	100	71.0	61.0	66.0	1
	M3	161	163.69	115	125	46.0	36.0	41.0	1
	M2	161	163.79	132	142	29.5	19.5	24.5	1
MW-64	M2	160	159.45	100	105	60.0	55.0	57.5	1
MW-79	M1	159	158.45	156	166	3.0	-7.0	-2.0	1
	M2	159	158.45	116	126	43.0	33.0	38.0	1
	S	159	158.47	89	99	70.0	60.0	65.0	1
MW-32	S	163	164.63	147	152	16.5	11.5	14.0	1
	M	163	164.62	162	172	1.5	-8.5	-3.5	1
	D	163	164.65	182	187	-18.5	-23.5	-21.0	1
MW-33	S	164	163.34	147	152	17.5	12.5	15.0	1
	M	164	163.34	162	172	2.5	-7.5	-2.5	1
	D	164	163.35	182	187	-17.5	-22.5	-20.0	1
MW-34	M3	145	144.69	111	121	34.0	24.0	29.0	1
	M2	145	144.55	131	141	14.0	4.0	9.0	1
	M1	145	144.39	151	161	-6.0	-16.0	-11.0	1
MW-35	S	154	153.63	84	94	70.0	60.0	65.0	1
	M2	154	153.64	100	110	54.0	44.0	49.0	1
	M1	154	153.63	155	165	-1.0	-11.0	-6.0	1
MW-36	S	143	143.04	73	83	70.0	60.0	65.0	1
	M2	143	143.03	131	141	12.0	2.0	7.0	1
MW-114	M2	147	146.37	120	130	27.0	17.0	22.0	1
	M1	147	146.35	177	187	-30.0	-40.0	-35.0	1
MW-129	M3	136	135.85	96	106	40.0	30.0	35.0	1
	M2	136	135.89	116	126	20.0	10.0	15.0	1
	M1	136	135.88	136	146	0.0	-10.0	-5.0	1
MW-162	M3	140	139.81	86	96	54.5	44.5	49.5	1
	M2	140	139.75	126	136	14.5	4.5	9.5	1
	M1	140	139.71	191	201	-50.5	-60.5	-55.5	1
MW-139	M3	149	148.58	119	129	30.0	20.0	25.0	1
	M2	149	148.57	154	164	-5.0	-15.0	-10.0	1
	M1	149	148.48	194	204	-45.0	-55.0	-50.0	1
MW-165	M3	143	142.66	95	105	48.5	38.5	43.5	1
	M2	143	142.73	125	135	18.5	8.5	13.5	1
	M1	143	142.72	185	195	-41.5	-51.5	-46.5	1
MW-172	M3	128	127.56	109	119	19.0	9.0	14.0	1
	M2	128	127.51	169	179	-41.0	-51.0	-46.0	1
	M1	128	127.51	199	209	-71.0	-81.0	-76.0	1
MW-210	M3	162	161.14	121	131	41.0	31.0	36.0	1
	M2	162	161.10	156	166	6.0	-4.0	1.0	1
	M1	162	161.10	201	211	-39.0	-49.0	-44.0	1
MW-214	M3	147	146.81	140	150	7.0	-3.0	2.0	1
	M2	147	146.81	165	175	-18.0	-28.0	-23.0	1
	M1	147	146.82	198	208	-51.0	-61.0	-56.0	1

Table 8-1
Wells in Proposed Hydraulic Monitoring Plan

Annual Environmental and System Performance Monitoring Plan
Demo 1 Groundwater Operable Unit

Well ID	Screen ID	Ground Elevation (ft bgs)	Top PVC or Steel Casing Elevation (ft NGVD)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Top of Screen Elevation (ft NGVD)	Bottom of Screen Elevation (ft NGVD)	Midscreen Elevation (ft NGVD)	Frequency of Measurements Per Year
MW-255	M3	167	166.84	136	146	31.0	21.0	26.0	1
	M2	167	166.79	170	180	-3.0	-13.0	-8.0	1
	M1	167	166.93	206	216	-39.0	-49.0	-44.0	1
MW-73	S	109	124.72	39	48	70.49	60.99	65.7	1
MW-74	M1	163	162.1	170	180	-7.46	-17.46	-12.5	1
	M2	163	162.13	125	135	37.55	27.55	32.6	1
	M3	163	162.13	100	110	62.54	52.54	57.5	1
MW-75	M1	150	149.26	140	150	10.06	0.06	5.1	1
	M2	150	149.36	115	125	35.06	25.06	30.1	1
	S	150	149.32	81	91	69.06	59.06	64.1	1
MW-76	M1	136	135.28	125	135	11.06	1.06	6.1	1
	M2	136	135.36	105	115	31.06	21.06	26.1	1
	S	136	135.36	85	95	51.06	41.06	46.1	1
MW-77	M1	151	150.87	180	190	-28.59	-38.59	-33.6	1
	M2	151	150.91	120	130	31.41	21.41	26.4	1
	S	151	150.88	83	93	68.41	58.41	63.4	1
MW-78	M3	146	145.90	85	95	61.0	51.0	56.0	1
	M2	146	145.70	115	125	31.0	21.0	26.0	1
	M1	146	145.90	135	145	11.0	1.0	6.0	1
Pew Road RA ETR System									
EW-D1-2	NA	200	197.31	175	215	25.0	-15.0	5.0	1
IW-D1-3	NA	201	201.19	165	245	36.0	-44.0	-4.0	1
IW-D1-4	NA	168	166.29	115	165	53.0	3.0	28.0	1
MW-173	M3	193	192.57	188	198	5.0	-5.0	0.0	1
	M2	193	192.59	208	218	-15.0	-25.0	-20.0	1
	M1	193	192.57	243	253	-50.0	-60.0	-55.0	1
MW-175	M3	184	184.14	162	167	22.0	17.0	19.5	1
	M2	184	184.15	199	209	-15.0	-25.0	-20.0	1
	M1	184	184.11	264	274	-80.0	-90.0	-85.0	1
MW-186	M2	181	180.42	182	192	-1.1	-11.1	-6.1	1
	M1	181	180.44	202	212	-21.1	-31.1	-26.1	1
MW-211	M3	200	199.71	150	160	50.0	40.0	45.0	1
	M2	200	199.72	175	185	25.0	15.0	20.0	1
	M1	200	199.73	200	210	0.0	-10.0	-5.0	1
MW-221	M3	202	200.97	156	166	46.0	36.0	41.0	1
	M2	202	200.93	178	188	24.0	14.0	19.0	1
	M1	202	201.02	221	231	-19.0	-29.0	-24.0	1
MW341	M4	218	217.78	182	187	36.5	31.5	34.0	1
	M3	218	218.38	210	220	8.5	-1.5	3.5	1
	M2	218	218.00	270	265	269.5	-46.5	111.5	1
	M1	218	217.91	290	300	-71.5	-81.5	-76.5	1
Base Boundary ETR System									
PZD1001		70.38	72.59	19	29	51.38	41.38	46.4	2
MW-225	M3	152	151.89	125	135	27.0	17.0	22.0	2
	M2	152	151.86	145	155	7.0	-3.0	2.0	2
	M1	152	151.88	175	185	-23.0	-33.0	-28.0	2
MW-231	M3	161	160.21	116	126	45.5	35.5	40.5	2
	M2	161	160.22	166	176	-4.5	-14.5	-9.5	2
	M1	161	160.08	211	221	-49.5	-59.5	-54.5	2
MW-240	M3	151	150.54	105	115	46.0	36.0	41.0	2
	M2	151	150.55	125	135	26.0	16.0	21.0	2
	M1	151	150.55	198	208	-47.0	-57.0	-52.0	2
MW-248	M3	161	160.68	143	153	18.0	8.0	13.0	2
	M2	161	160.64	178	188	-17.0	-27.0	-22.0	2
	M1	161	160.67	161	216	0.3	-55.3	-27.5	2

Table 8-1
Wells in Proposed Hydraulic Monitoring Plan

Annual Environmental and System Performance Monitoring Plan
Demo 1 Groundwater Operable Unit

Well ID	Screen ID	Ground Elevation (ft bgs)	Top PVC or Steel Casing Elevation (ft NGVD)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Top of Screen Elevation (ft NGVD)	Bottom of Screen Elevation (ft NGVD)	Midscreen Elevation (ft NGVD)	Frequency of Measurements Per Year
MW-252	M3	162	161.34	115	125	47.0	37.0	42.0	2
	M2	162	161.34	145	155	17.0	7.0	12.0	2
	M1	162	161.38	174	184	-12.0	-22.0	-17.0	2
MW-258	M1	92	92.05	109	119	-16.9	-26.9	-21.9	2
	M2	92	92.04	87	92	5.1	0.1	2.6	2
	M3	92	91.96	77	82	15.1	10.1	12.6	2
MW-352	M1	65	64.2	44	46	-50.36	-60.36	-55.4	2
	M2	65	64.26	65	75	-0.36	-10.36	-5.4	2
	M3	65	64.28	43	53	21.64	11.64	16.6	2
MW-353	M1	56	55.73	107	117	-50.98	-60.98	-56.0	2
	M2	56	55.67	57	67	-0.98	-10.98	-6.0	2
	M3	56	55.59	35	45	21.02	11.02	16.0	2
MW-531	M1	93	93.17	138	148	-44.84	-54.84	-49.8	2
MW-532	M1	110	110.44	168	178	-57.55	-67.55	-62.6	2
	M2	110	110.32	138	148	-27.55	-37.55	-32.6	2
MW-533	M1	110	110.30	160	170	-49.64	-59.64	-54.6	2
MW-542	M1	117	116.59	144	154	-27.19	-37.19	-32.2	2
MW-543	M1	58.3	57.8	127	137	-68.7	-78.7	-73.7	2
	M2	58.3	57.83	93	102	-34.7	-43.7	-39.2	2
MW-544	M1	73.7	73.22	162	172	-88.3	-98.3	-93.3	2
	M2	73.3	72.78	112	122	-38.7	-48.7	-43.7	2
	M3	73.7	73.22	77	87	-3.3	-13.3	-8.3	2
MW-545	M1	62.8	62.21	162	172	-99.2	-109.2	-104.2	2
	M2	62.7	62.17	142	152	-79.3	-89.3	-84.3	2
	M3	62.8	62.21	102	112	-39.2	-49.2	-44.2	2
	M4	62.7	62.17	72	82	-9.3	-19.3	-14.3	2
MW-546	M1	62.8	62.31	140	150	-77.2	-87.2	-82.2	2
	M2	62.8	62.28	100	110	-37.2	-47.2	-42.2	2
MW-554	M1	54.3	54.95	120	130	-65.7	-75.7	-70.7	2
	M2	54.3	54.95	90	100	-35.7	-45.7	-40.7	2
XX9514		56.9	58.66	102	112	-45.1	-55.1	-50.1	2
BHW5030020		58.1	59.79	18	20	39.96	38	39.0	2
MW-556	M1	49.60	49.54	153	163	-103.4	-113.4	-108.4	2
	M2	49.60	49.53	111	121	-61.4	-71.4	-66.4	2
MW-558	M1	55.83	55.62	134	144	-78.17	-88.17	-83.2	2
	M2	55.83	55.59	98	108	-42.17	-52.17	-47.2	2
MW-559	M1	51.01	50.78	136	146	-84.59	-94.59	-89.6	2
	M2	51.01	50.82	87	97	-35.99	-45.99	-41.0	2
North Pond	NA	NA	50.16	NA	NA	NA	NA	NA	2
South Pond	NA	NA	47.79	NA	NA	NA	NA	NA	2
West Pond	NA	NA	43.87	NA	NA	NA	NA	NA	2

Notes:
ft bgs = Feet below ground surface
All elevation measurements in feet NGVD (National Geodetic Vertical Datum) of 1929.
Injection and extraction well monitoring point elevations are for the drop tube located within the well.
Water Levels collectted 1x/year will be in Spring (April) and those 2x/yr will be Spring (April) and Fall (December)
NA = Not Applicable

Table 8-2
Approved Chemical Monitoring Schedule

Demolition Area 1 - 2011 Annual Monitoring Report

Well	Zone	Perchlorate Sampling Rounds/Year	Proposed Perchlorate Frequency	RDX Sampling Rounds/Year	Proposed RDX Frequency	Metals Sampling Rounds/Year[(1)]	Metals Sampling Rounds/Year	April Sampling Round	August Sampling Round	December Sampling Round
MW-114M1	1	2	1	2	1			P,E		
MW-114M2	1	2	1	2	1			P,E		
MW-129M1	1	1		1				P,E		
MW-129M2	1	2	1	2	1			P,E		
MW-129M3	1	1		1				P,E		
MW-139M1	1	1		1	0			P		
MW-139M2	1	1		2	1			P,E		
MW-162M2	1	1		0				P		
MW-165M1	1	1		1				P,E		
MW-165M2	1	2	1	2	1			P,E		
MW-172M2	1	1		0				P		
MW-19S	1	0		2		1	0	E		E
MW-255M2	1	1		0				P		
MW-31M	1	1		2				P,E		E
MW-31S	1	1		2				P,E		E
MW-34M1	1	1		1				P,E		
MW-34M2	1	1		1				P,E		
MW-36M1	1	1		0				P		
MW-36M2	1	1		1				P,E		
MW-73S	1	1		2		1	0	P,E		E
MW-75M1	1	1		1				P,E		
MW-75M2	1	1		1				P,E		
MW-76M1	1	1		1				P,E		
MW-76M2	1	2	1	2				P,E		E
MW-76S	1	1		1				P,E		
MW-77M1	1	1		1				P,E		
MW-77M2	1	2	1	2				P,E		E
MW-77S	1	1		1				P,E		
MW-78M1	1	1		1				P,E		
MW-78M2	1	1		1				P,E		
D1-EW-1	1	3		3				P,E	P,E	P,E
D1-EW-501	1	3		3				P,E	P,E	P,E
D1-EW-502	1	3		3				P,E	P,E	P,E
MW-210M1	2	1		1				P,E		
MW-210M2	2	1		1				P,E		
MW-210M3	2	1		1				P,E		
MW-211M1	2	2		2				P,E		P, E
MW-211M2	2	2	1	2	1			P,E		
MW-341M4	2	1		1				P,E		
MW-341M3	2	2		1				P,E		P
MW-341M2	2	1		0				P		
D1-EW-503	2	3		3				P,E	P,E	P,E
MW-225M2	3	3	1	3	1			P,E		
MW-225M3	3	3	1	3	1			P,E		
MW-240M1	3	1		0				P		
MW-240M2	3	1		0				P		
MW-240M3	3	1		0				P		
MW-248M2	3	1		0				P		
MW-248M3	3	1		0				P		
MW-252M1	3	1		0				P		
MW-252M2	3	1		0				P		
MW-252M3	3	1		0				P		
MW-258M1	3	3		0	1			P,E	P	P
MW-258M2	3	3	1	3	1			P,E		
MW-258M3	3	3	1	3	1			P,E		

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Approved Chemical Monitoring Schedule

Demolition Area 1 - 2011 Annual Monitoring Report

Well	Zone	Perchlorate Sampling Rounds/Year	Proposed Perchlorate Frequency	RDX Sampling Rounds/Year	Proposed RDX Frequency	Metals Sampling Rounds/Year[(1)]	Metals Sampling Rounds/Year	April Sampling Round	August Sampling Round	December Sampling Round
MW-352M1	3	1		0				P		
MW-352M2	3	1		0				P		
MW-353M1	3	1		0				P		
MW-353M2	3	1		0				P		
MW-531M1	3	1		0				P		
MW-532M1	3	3		3	1			P,E	P	P
MW-532M2	3	3		3				P,E	P,E	P,E
MW-542M1	3	1		0				P		
95-14	3	3		0				P	P	P
MW-543M1	3	n/a	2	n/a	2			P,E		P,E
MW-543M2	3	n/a	2	n/a	2			P,E		P,E
MW-544M1	3	n/a	2	n/a	2			P,E		P,E
MW-544M2	3	n/a	2	n/a	2			P,E		P,E
MW-544M3	3	n/a	2	n/a	2			P,E		P,E
MW-545M1	3	n/a	2	n/a	2			P,E		P,E
MW-545M2	3	n/a	2	n/a	2			P,E		P,E
MW-545M3	3	n/a	2	n/a	2			P,E		P,E
MW-545M4	3	n/a	2	n/a	2			P,E		P,E
MW-546M1	3	n/a	2	n/a	2			P,E		P,E
MW-546M2	3	n/a	2	n/a	2			P,E		P,E
MW-554M1	3	n/a	2	n/a	2			P,E		P,E
MW-554M2	3	n/a	2	n/a	2			P,E		P,E
MW-556M1	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-556M2	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-558M1	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-558M2	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-559M1	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-559M2	3	n/a	3	n/a	3			P,E	P,E	P,E

NOTES:

1. P = Perchlorate; E = Explosives, M = Metals
n/a = not applicable

APPENDIX A
ANALYTICAL SOLUTION OUTPUT

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WinFlow
Analytical Model of 2D Ground-Water Flow

Developed by

James O. Rumbaugh, III

Douglas B. Rumbaugh

(c) 1995-2001 Environmental Simulations, Inc.

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Date: 1/30/2012
Time: 14:04:06.00

Input File: ANALSOL_APR11_2011REV1.AQF
Map File :

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Model Entities

Number of Linesinks Defined by Infiltration Rate = 0

Number of Linesinks Defined by Head = 0

Number of Ponds = 0

Number of Wells = 9

Well #1
Center of Well -- x: 856732.250000 y: 253432.400000
Radius = 0.250000 ft
Pumping Rate = 150.000000 gal/min
Head at Well Radius = 67.894591 ft
Well #2
Center of Well -- x: 853933.010000 y: 252834.850000
Radius = 0.250000 ft
Pumping Rate = 100.000000 gal/min
Head at Well Radius = 66.152779 ft
Well #3
Center of Well -- x: 858230.210000 y: 253590.020000
Radius = 0.250000 ft
Pumping Rate = 150.000000 gal/min
Head at Well Radius = 68.404372 ft
Well #4
Center of Well -- x: 857313.870000 y: 253557.570000
Radius = 0.250000 ft
Pumping Rate = 100.000000 gal/min
Head at Well Radius = 68.491178 ft
Well #5
Center of Well -- x: 855401.530000 y: 253172.740000
Radius = 0.250000 ft
Pumping Rate = 100.000000 gal/min
Head at Well Radius = 67.338203 ft
Well #6
Center of Well -- x: 853462.870000 y: 254094.400000
Radius = 0.250000 ft
Pumping Rate = -50.000000 gal/min
Head at Well Radius = 67.260826 ft
Well #7
Center of Well -- x: 853462.870000 y: 251456.590000
Radius = 0.250000 ft
Pumping Rate = -50.000000 gal/min
Head at Well Radius = 66.789105 ft
Well #8
Center of Well -- x: 856677.630000 y: 254270.140000
Radius = 0.250000 ft
Pumping Rate = -250.000000 gal/min
Head at Well Radius = 71.354805 ft
Well #9
Center of Well -- x: 856732.310000 y: 252681.440000
Radius = 0.250000 ft
Pumping Rate = -250.000000 gal/min
Head at Well Radius = 71.292581 ft

Reference Head = 70.930000 ft Defined at -- x: 861180.980000 y: 254525.690000

==========

Calibration Targets

Target Head	Computed Head	Residual	Well Name
68.79	69.44	-0.6453	"MW-114M1"
68.79	69.43	-0.6406	"MW-129M1"
68.19	69.15	-0.9612	"MW-139M3"
68.91	69.45	-0.5366	"MW-162M2"
67.89	68.79	-0.9048	"MW-165M2"
67.77	69.16	-1.3862	"MW-172M3"
67.04	68.66	-1.6173	"MW-210M2"
67.76	69.33	-1.5673	"MW-214M3"
68.47	69.57	-1.0986	"MW-255M2"
68.39	69.45	-1.0551	"MW-32D"
68.12	69.29	-1.1738	"MW-33S"
68.71	69.46	-0.7516	"MW-34M1"
68.21	69.25	-1.0422	"MW-35M1"
68.88	69.50	-0.6186	"MW-36M2"
67.65	68.57	-0.9237	"MW-46M1"
68.04	68.97	-0.9347	"MW-47M2"
69.71	70.22	-0.5116	"MW-64M2"
69.56	70.07	-0.5088	"MW-78M1"
70.93	70.82	0.1097	"MW-79M1"

Number of Targets = 19
Residual Mean = -0.882550
Residual Standard Deviation = 0.400226
Residual Sum of Squares = 17.842427
Absolute Residual Mean = 0.894094
Minimum Residual = -1.617257
Maximum Residual = 0.109665
Observed Range in Head = 3.889999
Resid. Std./Range in Head = 0.102886

==========

Aquifer Properties

.... Steady-State Flow Model ....

Permeability.....= 115.000000 ft/d
Porosity.....= 0.300000
Elevation of Aquifer Top....= 68.000000 ft
Elevation of Aquifer Bottom.= -160.000000 ft
Uniform Regional Gradient...= 0.000700
Angle of Uniform Gradient...= 190.000000
Recharge.....= 0.007078 ft/d

==========

Contour Matrix

Number of nodes in the X-direction = 35
Number of nodes in the Y-direction = 35

Minimum X Coordinate = 850300.000000 ft
Minimum Y Coordinate = 250700.000000 ft

Maximum X Coordinate = 861177.620000 ft
Maximum Y Coordinate = 255741.100000 ft

Minimum Head = 62.923815 ft
Maximum Head = 70.993059 ft

CONTOUR GRID -----

Row 1

62.923815	63.265635	63.599727	63.926242	64.245390
64.557452	64.862777	65.161682	65.454002	65.737879
66.008886	66.264902	66.510514	66.750550	66.986706
67.218858	67.446107	67.667119	67.880246	68.083761
68.276384	68.457548	68.627733	68.788249	68.940691
69.086439	69.226414	69.361058	69.490439	69.614385
69.732608	69.844789	69.950629	70.049873	70.142314

Row 2

63.011436	63.353078	63.686988	64.013328	64.332334
64.644348	64.949860	65.249479	65.543539	65.830254
66.102355	66.355136	66.597096	66.835231	67.070968
67.303704	67.532213	67.754880	67.969702	68.174545
68.367660	68.548256	68.716999	68.875647	69.026259
69.170515	69.309457	69.443512	69.572665	69.696639
69.815050	69.927506	70.033653	70.133204	70.225934

Row 3

63.094529	63.435982	63.769691	64.095821	64.414624
64.726499	65.032073	65.332313	65.628396	65.919631
66.194383	66.441479	66.678317	66.914345	67.149825
67.383417	67.613539	67.838302	68.055319	68.261937
68.455724	68.635601	68.802503	68.958828	69.107242
69.249785	69.387606	69.521080	69.650066	69.774152
69.892839	70.005643	70.112160	70.212066	70.305122

Row 4

63.173102	63.514357	63.847843	64.173723	64.492255
64.803869	65.109310	65.409903	65.707967	66.006039
66.287653	66.523423	66.753507	66.987516	67.223050
67.457841	67.689983	67.917365	68.137226	68.346183
68.540890	68.719832	68.884349	69.037758	69.183531

69.324118	69.460743	69.593671	69.722583	69.846893
69.965957	70.079200	70.186154	70.286467	70.379886

Row 5

63.247164	63.588212	63.921456	64.247047	64.565232
64.876444	65.181488	65.481954	65.781267	66.087813
66.390038	66.598962	66.821734	67.054340	67.290414
67.526807	67.761415	67.992025	68.215537	68.427598
68.623577	68.801274	68.962647	69.112368	69.254971
69.393347	69.528728	69.661185	69.790154	69.914827
70.034395	70.148175	70.255642	70.356416	70.450235

Row 6

63.316726	63.657561	63.990546	64.315810	64.633571
64.944229	65.248567	65.548236	65.847170	66.158190
66.535213	66.663435	66.881998	67.114448	67.351706
67.590136	67.827671	68.062201	68.290364	68.506587
68.704360	68.880350	69.037504	69.182533	69.321346
69.457260	69.591392	69.723508	69.852714	69.977925
70.098144	70.212575	70.320636	70.421927	70.516183

Row 7

63.381799	63.722418	64.055131	64.380037	64.697306
65.007264	65.310579	65.608705	65.905115	66.209555
66.516503	66.712819	66.933662	67.167584	67.406759
67.647640	67.888533	68.127745	68.361791	68.583675
68.784049	68.957624	69.109001	69.248035	69.382362
69.515593	69.648541	69.780519	69.910200	70.036167
70.157208	70.272412	70.381152	70.483016	70.577745

Row 8

63.442396	63.782800	64.115235	64.439762	64.756486
65.065622	65.367635	65.663554	65.955643	66.247554
66.523476	66.749548	66.976727	67.213649	67.455471
67.699130	67.943714	68.188381	68.429823	68.659530
68.863823	69.033853	69.177142	69.308518	69.437620
69.568021	69.699951	69.832088	69.962555	70.089539
70.211596	70.327709	70.437214	70.539705	70.634940

Row 9

63.498528	63.838724	64.170883	64.495023	64.811172
65.119407	65.419923	65.713186	66.000038	66.280214
66.542641	66.778098	67.011593	67.252702	67.497828
67.744412	67.992833	68.243663	68.494292	68.734983
68.945489	69.110045	69.241744	69.363418	69.486597
69.614155	69.745371	69.878083	70.009732	70.138044
70.261335	70.378496	70.488852	70.592020	70.687790

Row 10

63.550209	63.890207	64.222102	64.545864	64.861437
65.168744	65.467682	65.758108	66.039606	66.310111
66.563364	66.800220	67.038568	67.284941	67.533937
67.783293	68.035393	68.292913	68.554680	68.810967
69.031988	69.187513	69.302229	69.411882	69.528631
69.653539	69.784528	69.918380	70.051705	70.181707

70.306466	70.424815	70.536104	70.639992	70.736318

Row 11

63.597450	63.937269	64.268920	64.592328	64.907357
65.213771	65.511173	65.798844	66.075350	66.337708
66.582274	66.815532	67.057520	67.310731	67.564072
67.815580	68.070745	68.335172	68.609841	68.888173
69.128586	69.267746	69.357232	69.452689	69.562925
69.685660	69.817132	69.952871	70.088477	70.220578
70.347050	70.466724	70.579014	70.683656	70.780551

Row 12

63.640263	63.979924	64.311362	64.634460	64.949006
65.254625	65.550651	65.835868	66.108025	66.363276
66.598119	66.822333	67.067727	67.330781	67.588756
67.841073	68.098031	68.369214	68.657660	68.965750
69.246154	69.351389	69.404001	69.484251	69.588585
69.709950	69.842887	69.981482	70.120097	70.254744
70.383172	70.504290	70.617636	70.723051	70.820518

Row 13

63.678657	64.018188	64.349452	64.672298	64.986453
65.291429	65.586344	65.869589	66.138251	66.387417
66.611091	66.817283	67.067916	67.346511	67.608859
67.859558	68.116093	68.393702	68.694972	69.037287
69.413470	69.433348	69.437879	69.504766	69.604693
69.725795	69.861498	70.004195	70.146675	70.284336
70.414942	70.537598	70.652030	70.758221	70.856250

Row 14

63.712640	64.052073	64.383208	64.705873	65.019753
65.324282	65.618432	65.900328	66.166567	66.411127
66.623473	66.793890	67.057615	67.360591	67.625681
67.870816	68.123170	68.407575	68.718427	69.083875
69.758307	69.487910	69.452952	69.512642	69.610413
69.732516	69.872684	70.021087	70.168406	70.309537
70.442498	70.566743	70.682261	70.789209	70.887777

Row 15

63.742220	64.081587	64.412644	64.735206	65.048943
65.353251	65.647040	65.928309	66.193399	66.435557
66.640380	66.749394	67.047707	67.376966	67.640962
67.874851	68.115996	68.410772	68.726768	69.082123
69.621590	69.471087	69.445002	69.507094	69.605099
69.729278	69.876194	70.032387	70.185598	70.330586
70.466002	70.591832	70.708399	70.816063	70.915132

Row 16

63.767398	64.106735	64.437766	64.760310	65.074040
65.378369	65.672225	65.953639	66.218980	66.461493
66.667078	66.788248	67.076692	67.399087	67.656782
67.873060	68.086530	68.405703	68.723090	69.038069
69.347081	69.392092	69.414819	69.488692	69.588349
69.714855	69.871867	70.038571	70.198699	70.347780
70.485637	70.612975	70.730514	70.838826	70.938344

Row 17

63.788176	64.127518	64.458575	64.781181	65.095042
65.399626	65.693970	65.976296	66.243291	66.488892
66.702916	66.880856	67.137021	67.427203	67.675229
67.872246	68.002761	68.400245	68.714563	68.979474
69.182445	69.294117	69.367413	69.459665	69.560042
69.687032	69.859832	70.040502	70.208314	70.361464
70.501595	70.630285	70.748672	70.857542	70.957440

Row 18

63.804554	64.143933	64.475064	64.797809	65.111924
65.416976	65.712188	65.996126	66.266056	66.516949
66.742354	66.950318	67.193978	67.458566	67.697603
67.887559	67.938599	68.408081	68.709609	68.927083
69.034510	69.198387	69.307237	69.424354	69.520623
69.641033	69.841174	70.039605	70.215183	70.372003
70.514066	70.643866	70.762936	70.872247	70.972443

Row 19

63.816526	64.155973	64.487221	64.810170	65.124643
65.430337	65.726725	66.012851	66.286801	66.544611
66.781043	67.003613	67.241127	67.489961	67.723379
67.923195	68.110693	68.434142	68.714746	68.898051
68.816759	69.124939	69.229513	69.390776	69.473230
69.564620	69.819735	70.037920	70.220111	70.379742
70.523216	70.653806	70.773353	70.882972	70.983373

Row 20

63.824089	64.163628	64.495028	64.818232	65.133140
65.439598	65.737372	66.026085	66.304897	66.571040
66.817543	67.046520	67.279451	67.518989	67.750208
67.964168	68.187169	68.468756	68.732663	68.908985
68.857585	69.110860	69.068952	69.372913	69.433725
69.423014	69.804852	70.037756	70.223806	70.384957
70.529170	70.660168	70.779961	70.889737	70.990243

Row 21

63.827235	64.166887	64.498466	64.821959	65.137348
65.444633	65.743883	66.035349	66.319538	66.595726
66.852597	67.081849	67.309947	67.543985	67.775179
68.000134	68.236767	68.503356	68.761862	68.958748
69.049258	69.167851	69.183219	69.384078	69.439303
69.429709	69.808165	70.040742	70.226686	70.387797
70.531994	70.662986	70.782777	70.892552	70.993059

Row 22

63.825955	64.165736	64.497511	64.821311	65.137196
65.445308	65.745995	66.040108	66.329655	66.618023
66.889396	67.110469	67.332853	67.563730	67.795946
68.028258	68.271620	68.534073	68.797593	69.031772
69.188950	69.262737	69.306158	69.419517	69.488759
69.577020	69.829480	70.046842	70.228741	70.388258
70.531686	70.662259	70.781801	70.891419	70.991822

Row 23

63.820240	64.160160	64.492139	64.816249	65.132615
65.441498	65.743466	66.039829	66.333881	66.635223
66.938530	67.130818	67.347817	67.577327	67.811011
68.048139	68.295549	68.558580	68.833160	69.116017
69.340147	69.364999	69.385510	69.462947	69.544002
69.659369	69.856992	70.054366	70.229529	70.386181
70.528176	70.657952	70.777014	70.886326	70.986525

Row 24

63.810083	64.150146	64.482329	64.806735	65.123544
65.433097	65.736097	66.034086	66.330880	66.639214
67.012732	67.138487	67.354318	67.584182	67.819538
68.059859	68.309861	68.574789	68.860817	69.197686
69.556113	69.455842	69.442340	69.502358	69.589251
69.710990	69.881394	70.060977	70.228327	70.381285
70.521338	70.650000	70.768380	70.877252	70.977154

Row 25

63.795472	64.135679	64.468059	64.792740	65.109934
65.420028	65.723766	66.022661	66.320072	66.624350
66.924047	67.131059	67.352223	67.584001	67.821135
68.063559	68.314976	68.580947	68.873211	69.243503
70.130974	69.509243	69.477547	69.531600	69.621728
69.743923	69.898899	70.064633	70.224326	70.373220
70.511002	70.638315	70.755849	70.864167	70.963691

Row 26

63.776400	64.116749	64.449313	64.774237	65.091750
65.402247	65.706428	66.005576	66.301983	66.598214
66.878031	67.112529	67.342043	67.576776	67.815687
68.059408	68.311101	68.576105	68.866319	69.221073
69.631632	69.504452	69.490524	69.548143	69.641560
69.763013	69.908476	70.063929	70.216788	70.361622
70.496979	70.622792	70.739361	70.847033	70.946112

Row 27

63.752859	64.093343	64.426076	64.751209	65.068973
65.379739	65.684111	65.983037	66.277704	66.567499
66.841027	67.087498	67.324673	67.562704	67.803268
68.047633	68.298536	68.560382	68.841424	69.154768
69.424972	69.458455	69.483509	69.551656	69.649517
69.770652	69.910068	70.058026	70.205118	70.346150
70.479079	70.603321	70.718848	70.825809	70.924390

Row 28

63.724842	64.065454	64.398338	64.723645	65.041595
65.352516	65.656888	65.955323	66.248193	66.533823
66.805181	67.057916	67.300970	67.542095	67.784068
68.028535	68.277761	68.534790	68.803233	69.079363
69.302500	69.398321	69.461048	69.543094	69.646571
69.768269	69.903916	70.046485	70.188883	70.326513
70.457120	70.579790	70.694241	70.800450	70.898496

Row 29

63.692342	64.033074	64.366092	64.691540	65.009619
65.320606	65.624852	65.922695	66.214031	66.497129
66.767796	67.024252	67.271558	67.515286	67.758349
68.002475	68.249399	68.500766	68.756474	69.006397
69.210336	69.336043	69.427710	69.523984	69.633762
69.756871	69.890347	70.029110	70.167790	70.302479
70.430943	70.552096	70.665471	70.770911	70.868398

Row 30

63.655355	63.996198	64.329333	64.654893	64.973056
65.284043	65.588097	65.885355	66.175498	66.457087
66.727643	66.986506	67.236829	67.482591	67.726401
67.969851	68.214129	68.459719	68.704288	68.936907
69.132044	69.274314	69.386780	69.495905	69.612108
69.737257	69.869704	70.005857	70.141659	70.273871
70.400416	70.520144	70.632475	70.737148	70.834065

Row 31

63.613876	63.954823	64.288059	64.613707	64.931919
65.242866	65.546701	65.843440	66.132702	66.413397
66.684071	66.944574	67.197023	67.444285	67.688520
67.931061	68.172597	68.412791	68.648320	68.869612
69.060444	69.212929	69.340215	69.460210	69.582531
69.710096	69.842322	69.976765	70.110392	70.240565
70.365431	70.483852	70.595192	70.699117	70.795469

Row 32

63.567902	63.908946	64.242271	64.567988	64.886224
65.197107	65.500728	65.797033	66.085661	66.365831
66.636700	66.898352	67.152289	67.400597	67.644984
67.886480	68.125363	68.360795	68.589268	68.803080
68.991767	69.151072	69.289049	69.417940	69.545824
69.675960	69.808516	69.941926	70.073952	70.202481
70.325906	70.443154	70.553570	70.656780	70.752579

Row 33

63.517429	63.858564	64.191969	64.517741	64.835986
65.146798	65.450223	65.746179	66.034361	66.314226
66.585297	66.847763	67.102727	67.351719	67.596044
67.836441	68.072878	68.304262	68.527339	68.736146
68.923807	69.087940	69.233780	69.369843	69.502633
69.635333	69.768579	69.901453	70.032340	70.159572
70.281783	70.397995	70.507566	70.610103	70.705369

Row 34

63.462455	63.803678	64.137155	64.462973	64.781219
65.091961	65.395217	65.690902	65.978771	66.258461
66.529715	66.792756	67.048413	67.297811	67.541919
67.781225	68.015488	68.243514	68.462504	68.667922
68.855165	69.022874	69.174615	69.316437	69.453473
69.588621	69.722772	69.855473	69.985586	70.111815
70.233021	70.348332	70.457143	70.559054	70.653816

Row 35

63.402978	63.744286	64.077831	64.403690	64.721934
65.032614	65.335732	65.631209	65.918862	66.198452
66.469856	66.733297	66.989404	67.239005	67.482795
67.721061	67.953442	68.178733	68.394639	68.597744
68.784909	68.955358	69.111619	69.258071	69.398739
69.536160	69.671329	69.804111	69.933736	70.059210
70.179596	70.294136	70.402270	70.503609	70.597898

==========

Streamlines

Number of Streamlines = 0

==========

Particle Traces

Number of Particle-traces = 250

Particle-trace #1

Coordinates of Particle-trace:
Start x: 855427.560000 y: 253169.570000 time: 0.000000
End x: 856702.206995 y: 252558.890056 time: 3717.341760

Particle-trace #2

Coordinates of Particle-trace:
Start x: 855427.362868 y: 253172.703331 time: 0.000000
End x: 856821.967234 y: 252415.840403 time: 3929.873355

Particle-trace #3

Coordinates of Particle-trace:
Start x: 855426.774579 y: 253175.787247 time: 0.000000
End x: 856762.011757 y: 252615.711577 time: 3932.854127

Particle-trace #4

Coordinates of Particle-trace:
Start x: 855425.804412 y: 253178.773114 time: 0.000000
End x: 856726.556684 y: 252733.234964 time: 4052.004409

Particle-trace #5

Coordinates of Particle-trace:
Start x: 855424.467667 y: 253181.613842 time: 0.000000
End x: 856675.318824 y: 252652.027790 time: 4186.706738

Particle-trace #6

Coordinates of Particle-trace:
Start x: 855422.785425 y: 253184.264631 time: 0.000000
End x: 856873.610965 y: 252701.668776 time: 4454.127597

Particle-trace #7

Coordinates of Particle-trace:
Start x: 855420.784216 y: 253186.683677 time: 0.000000
End x: 856808.764659 y: 252486.521850 time: 4639.781386

Particle-trace #8

Coordinates of Particle-trace:
Start x: 855418.495600 y: 253188.832831 time: 0.000000
End x: 856951.128704 y: 252763.358749 time: 5020.497664

Particle-trace #9

Coordinates of Particle-trace:
Start x: 855415.955670 y: 253190.678198 time: 0.000000
End x: 856677.594361 y: 252622.905609 time: 5385.308678

Particle-trace #10

```
     Coordinates of Particle-trace:
      Start   x: 855413.204483   y: 253192.190676   time: 0.000000
      End     x: 856742.544902   y: 252694.441972   time: 6258.891712

Particle-trace #11

     Coordinates of Particle-trace:
      Start   x: 855410.285425   y: 253193.346413   time: 0.000000
      End     x: 856685.975013   y: 254387.156092   time: 7069.480180

Particle-trace #12

     Coordinates of Particle-trace:
      Start   x: 855407.244533   y: 253194.127181   time: 0.000000
      End     x: 856685.942987   y: 254326.006689   time: 6103.082997

Particle-trace #13

     Coordinates of Particle-trace:
      Start   x: 855404.129764   y: 253194.520668   time: 0.000000
      End     x: 856792.703582   y: 254154.851274   time: 5731.686364

Particle-trace #14

     Coordinates of Particle-trace:
      Start   x: 855400.990238   y: 253194.520668   time: 0.000000
      End     x: 856660.388310   y: 254315.991494   time: 5501.553450

Particle-trace #15

     Coordinates of Particle-trace:
      Start   x: 855397.875468   y: 253194.127181   time: 0.000000
      End     x: 856682.739850   y: 254220.346049   time: 5288.821621

Particle-trace #16

     Coordinates of Particle-trace:
      Start   x: 855394.834576   y: 253193.346413   time: 0.000000
      End     x: 856674.521030   y: 254244.259448   time: 5180.814646

Particle-trace #17

     Coordinates of Particle-trace:
      Start   x: 855391.915518   y: 253192.190677   time: 0.000000
      End     x: 856661.405426   y: 254269.370407   time: 5096.252965

Particle-trace #18

     Coordinates of Particle-trace:
      Start   x: 855389.164331   y: 253190.678199   time: 0.000000
      End     x: 856646.142369   y: 254287.987684   time: 5030.459155

Particle-trace #19

     Coordinates of Particle-trace:
      Start   x: 855386.624401   y: 253188.832832   time: 0.000000
      End     x: 856647.430807   y: 254290.112230   time: 4984.102512

Particle-trace #20

     Coordinates of Particle-trace:
      Start   x: 855384.335785   y: 253186.683678   time: 0.000000
      End     x: 856664.372352   y: 254267.775674   time: 4961.113038

Particle-trace #21
```

```
     Coordinates of Particle-trace:
      Start   x: 855382.334576   y: 253184.264632   time: 0.000000
      End     x: 856672.707962   y: 254232.225838   time: 4966.346169

Particle-trace #22

     Coordinates of Particle-trace:
      Start   x: 855380.652334   y: 253181.613843   time: 0.000000
      End     x: 856668.654624   y: 254345.445259   time: 5069.465569

Particle-trace #23

     Coordinates of Particle-trace:
      Start   x: 855379.315588   y: 253178.773115   time: 0.000000
      End     x: 856926.888955   y: 254236.346695   time: 5167.785535

Particle-trace #24

     Coordinates of Particle-trace:
      Start   x: 855378.345421   y: 253175.787248   time: 0.000000
      End     x: 856691.218698   y: 254286.356747   time: 5309.996178

Particle-trace #25

     Coordinates of Particle-trace:
      Start   x: 855377.757133   y: 253172.703332   time: 0.000000
      End     x: 856673.130048   y: 254227.241902   time: 5555.529745

Particle-trace #26

     Coordinates of Particle-trace:
      Start   x: 855377.560000   y: 253169.570001   time: 0.000000
      End     x: 856666.882019   y: 254257.134752   time: 6292.632572

Particle-trace #27

     Coordinates of Particle-trace:
      Start   x: 855377.757132   y: 253166.436671   time: 0.000000
      End     x: 856872.609180   y: 252628.091502   time: 4337.919380

Particle-trace #28

     Coordinates of Particle-trace:
      Start   x: 855378.345421   y: 253163.352754   time: 0.000000
      End     x: 856761.245813   y: 252669.666746   time: 3855.614288

Particle-trace #29

     Coordinates of Particle-trace:
      Start   x: 855379.315587   y: 253160.366888   time: 0.000000
      End     x: 856731.675736   y: 252690.929849   time: 3632.827222

Particle-trace #30

     Coordinates of Particle-trace:
      Start   x: 855380.652332   y: 253157.526160   time: 0.000000
      End     x: 856712.346403   y: 252693.945945   time: 3444.716001

Particle-trace #31

     Coordinates of Particle-trace:
      Start   x: 855382.334574   y: 253154.875370   time: 0.000000
      End     x: 856688.884216   y: 252391.482685   time: 3363.560629

Particle-trace #32

     Coordinates of Particle-trace:
```

```
      Start   x: 855384.335783   y: 253152.456324   time: 0.000000
      End     x: 856735.342882   y: 252684.689511   time: 3375.025464

Particle-trace #33

     Coordinates of Particle-trace:
      Start   x: 855386.624399   y: 253150.307170   time: 0.000000
      End     x: 856722.828193   y: 252697.984185   time: 3263.453529

Particle-trace #34

     Coordinates of Particle-trace:
      Start   x: 855389.164329   y: 253148.461803   time: 0.000000
      End     x: 856754.253311   y: 252671.159511   time: 3232.189799

Particle-trace #35

     Coordinates of Particle-trace:
      Start   x: 855391.915516   y: 253146.949324   time: 0.000000
      End     x: 856786.158577   y: 252643.172911   time: 3209.121624

Particle-trace #36

     Coordinates of Particle-trace:
      Start   x: 855394.834573   y: 253145.793588   time: 0.000000
      End     x: 856835.703360   y: 252614.537649   time: 3192.567427

Particle-trace #37

     Coordinates of Particle-trace:
      Start   x: 855397.875465   y: 253145.012819   time: 0.000000
      End     x: 856964.150172   y: 252630.745232   time: 3181.584794

Particle-trace #38

     Coordinates of Particle-trace:
      Start   x: 855400.990235   y: 253144.619332   time: 0.000000
      End     x: 856864.692277   y: 252782.459560   time: 3175.772529

Particle-trace #39

     Coordinates of Particle-trace:
      Start   x: 855404.129761   y: 253144.619332   time: 0.000000
      End     x: 856753.897348   y: 253020.662252   time: 3175.144131

Particle-trace #40

     Coordinates of Particle-trace:
      Start   x: 855407.244531   y: 253145.012818   time: 0.000000
      End     x: 856731.158117   y: 252859.524244   time: 3180.031552

Particle-trace #41

     Coordinates of Particle-trace:
      Start   x: 855410.285423   y: 253145.793586   time: 0.000000
      End     x: 856743.054634   y: 252703.878513   time: 3319.540324

Particle-trace #42

     Coordinates of Particle-trace:
      Start   x: 855413.204480   y: 253146.949323   time: 0.000000
      End     x: 856740.474577   y: 252843.746536   time: 3208.657149

Particle-trace #43

     Coordinates of Particle-trace:
      Start   x: 855415.955668   y: 253148.461801   time: 0.000000
```

```
      End     x: 856786.468330   y: 252937.662448   time: 3233.591367

Particle-trace #44

     Coordinates of Particle-trace:
      Start   x: 855418.495598   y: 253150.307167   time: 0.000000
      End     x: 857046.280066   y: 252676.884257   time: 3266.036947

Particle-trace #45

     Coordinates of Particle-trace:
      Start   x: 855420.784214   y: 253152.456321   time: 0.000000
      End     x: 856808.975271   y: 252591.706851   time: 3305.786753

Particle-trace #46

     Coordinates of Particle-trace:
      Start   x: 855422.785423   y: 253154.875367   time: 0.000000
      End     x: 856758.314196   y: 252652.410428   time: 3352.197944

Particle-trace #47

     Coordinates of Particle-trace:
      Start   x: 855424.467666   y: 253157.526156   time: 0.000000
      End     x: 856731.781350   y: 252702.904551   time: 3404.395125

Particle-trace #48

     Coordinates of Particle-trace:
      Start   x: 855425.804411   y: 253160.366884   time: 0.000000
      End     x: 856773.779334   y: 252349.186939   time: 3742.011351

Particle-trace #49

     Coordinates of Particle-trace:
      Start   x: 855426.774578   y: 253163.352750   time: 0.000000
      End     x: 856744.990530   y: 252683.832655   time: 3716.737396

Particle-trace #50

     Coordinates of Particle-trace:
      Start   x: 855427.362867   y: 253166.436667   time: 0.000000
      End     x: 856720.154610   y: 252695.968807   time: 3589.395343

Particle-trace #51

     Coordinates of Particle-trace:
      Start   x: 856759.690000   y: 253431.880000   time: 0.000000
      End     x: 857629.546399   y: 252736.774017   time: 6552.152264

Particle-trace #52

     Coordinates of Particle-trace:
      Start   x: 856759.492868   y: 253435.013331   time: 0.000000
      End     x: 857677.449890   y: 252759.503142   time: 6285.235688

Particle-trace #53

     Coordinates of Particle-trace:
      Start   x: 856758.904579   y: 253438.097247   time: 0.000000
      End     x: 857691.689488   y: 252789.130602   time: 7246.504310

Particle-trace #54

     Coordinates of Particle-trace:
      Start   x: 856757.934412   y: 253441.083114   time: 0.000000
      End     x: 856930.117140   y: 254292.012600   time: 7290.703298
```

Particle-trace #55

Coordinates of Particle-trace:
Start x: 856756.597667 y: 253443.923842 time: 0.000000
End x: 856717.719383 y: 254273.859647 time: 5537.760618

Particle-trace #56

Coordinates of Particle-trace:
Start x: 856754.915425 y: 253446.574631 time: 0.000000
End x: 856934.286573 y: 254058.770636 time: 4603.684490

Particle-trace #57

Coordinates of Particle-trace:
Start x: 856752.914216 y: 253448.993677 time: 0.000000
End x: 856722.288362 y: 254259.173855 time: 3882.069544

Particle-trace #58

Coordinates of Particle-trace:
Start x: 856750.625600 y: 253451.142831 time: 0.000000
End x: 856653.989118 y: 254281.520920 time: 3436.387913

Particle-trace #59

Coordinates of Particle-trace:
Start x: 856748.085670 y: 253452.988198 time: 0.000000
End x: 856670.742889 y: 254245.265320 time: 2977.547938

Particle-trace #60

Coordinates of Particle-trace:
Start x: 856745.334483 y: 253454.500676 time: 0.000000
End x: 856690.144675 y: 254274.371135 time: 2707.682884

Particle-trace #61

Coordinates of Particle-trace:
Start x: 856742.415425 y: 253455.656413 time: 0.000000
End x: 856661.371190 y: 254272.428257 time: 2457.444397

Particle-trace #62

Coordinates of Particle-trace:
Start x: 856739.374533 y: 253456.437181 time: 0.000000
End x: 856632.192007 y: 254231.602441 time: 2230.099772

Particle-trace #63

Coordinates of Particle-trace:
Start x: 856736.259764 y: 253456.830668 time: 0.000000
End x: 856737.827309 y: 254474.170612 time: 2341.380223

Particle-trace #64

Coordinates of Particle-trace:
Start x: 856733.120238 y: 253456.830668 time: 0.000000
End x: 856662.235944 y: 254296.741980 time: 2005.643636

Particle-trace #65

Coordinates of Particle-trace:
Start x: 856730.005468 y: 253456.437181 time: 0.000000
End x: 856750.973834 y: 254699.637191 time: 1916.564083

Particle-trace #66

Coordinates of Particle-trace:
Start x: 856726.964576 y: 253455.656413 time: 0.000000
End x: 856679.162085 y: 254271.945097 time: 1839.054735

Particle-trace #67

Coordinates of Particle-trace:
Start x: 856724.045518 y: 253454.500677 time: 0.000000
End x: 856715.958332 y: 254232.005806 time: 1716.374456

Particle-trace #68

Coordinates of Particle-trace:
Start x: 856721.294331 y: 253452.988199 time: 0.000000
End x: 856686.576477 y: 254243.430278 time: 1690.121324

Particle-trace #69

Coordinates of Particle-trace:
Start x: 856718.754401 y: 253451.142832 time: 0.000000
End x: 856659.152848 y: 254249.389852 time: 1677.519595

Particle-trace #70

Coordinates of Particle-trace:
Start x: 856716.465785 y: 253448.993678 time: 0.000000
End x: 856657.002326 y: 254251.440113 time: 1685.240238

Particle-trace #71

Coordinates of Particle-trace:
Start x: 856714.464576 y: 253446.574632 time: 0.000000
End x: 856684.574676 y: 254241.838207 time: 1722.145643

Particle-trace #72

Coordinates of Particle-trace:
Start x: 856712.782334 y: 253443.923843 time: 0.000000
End x: 856609.538827 y: 254304.992581 time: 1863.474936

Particle-trace #73

Coordinates of Particle-trace:
Start x: 856711.445588 y: 253441.083115 time: 0.000000
End x: 856739.309401 y: 254615.120501 time: 2029.315179

Particle-trace #74

Coordinates of Particle-trace:
Start x: 856710.475421 y: 253438.097248 time: 0.000000
End x: 856685.302732 y: 254245.319334 time: 2637.898921

Particle-trace #75

Coordinates of Particle-trace:
Start x: 856709.887133 y: 253435.013332 time: 0.000000
End x: 856686.549950 y: 254230.926839 time: 2724.141478

Particle-trace #76

Coordinates of Particle-trace:
Start x: 856709.690000 y: 253431.880001 time: 0.000000
End x: 856700.271712 y: 252659.187353 time: 6565.949552

Particle-trace #77

```
     Coordinates of Particle-trace:
      Start   x: 856709.887132   y: 253428.746671   time: 0.000000
      End     x: 856695.246193   y: 252627.185795   time: 2358.415057

Particle-trace #78

     Coordinates of Particle-trace:
      Start   x: 856710.475421   y: 253425.662754   time: 0.000000
      End     x: 856737.081452   y: 252685.967597   time: 2007.129097

Particle-trace #79

     Coordinates of Particle-trace:
      Start   x: 856711.445587   y: 253422.676888   time: 0.000000
      End     x: 856740.855164   y: 252643.299135   time: 1685.570175

Particle-trace #80

     Coordinates of Particle-trace:
      Start   x: 856712.782332   y: 253419.836160   time: 0.000000
      End     x: 856873.773114   y: 252748.117592   time: 1548.015635

Particle-trace #81

     Coordinates of Particle-trace:
      Start   x: 856714.464574   y: 253417.185370   time: 0.000000
      End     x: 856686.561557   y: 252651.649272   time: 1459.796537

Particle-trace #82

     Coordinates of Particle-trace:
      Start   x: 856716.465783   y: 253414.766324   time: 0.000000
      End     x: 856883.914150   y: 252661.737668   time: 1505.831671

Particle-trace #83

     Coordinates of Particle-trace:
      Start   x: 856718.754399   y: 253412.617170   time: 0.000000
      End     x: 856619.659781   y: 252705.902835   time: 1405.792428

Particle-trace #84

     Coordinates of Particle-trace:
      Start   x: 856721.294329   y: 253410.771803   time: 0.000000
      End     x: 856647.848825   y: 252658.663535   time: 1424.569051

Particle-trace #85

     Coordinates of Particle-trace:
      Start   x: 856724.045516   y: 253409.259324   time: 0.000000
      End     x: 856762.244117   y: 252689.302694   time: 1461.301964

Particle-trace #86

     Coordinates of Particle-trace:
      Start   x: 856726.964573   y: 253408.103588   time: 0.000000
      End     x: 856983.487740   y: 252575.079054   time: 1510.695354

Particle-trace #87

     Coordinates of Particle-trace:
      Start   x: 856730.005465   y: 253407.322819   time: 0.000000
      End     x: 856694.079200   y: 252607.072242   time: 1571.232339

Particle-trace #88
```

```
     Coordinates of Particle-trace:
      Start   x: 856733.120235   y: 253406.929332   time: 0.000000
      End     x: 856758.457488   y: 252690.769932   time: 1643.741566

Particle-trace #89

     Coordinates of Particle-trace:
      Start   x: 856736.259761   y: 253406.929332   time: 0.000000
      End     x: 856654.207479   y: 252678.765270   time: 2160.423678

Particle-trace #90

     Coordinates of Particle-trace:
      Start   x: 856739.374531   y: 253407.322818   time: 0.000000
      End     x: 856719.753746   y: 252711.100726   time: 1832.739855

Particle-trace #91

     Coordinates of Particle-trace:
      Start   x: 856742.415423   y: 253408.103586   time: 0.000000
      End     x: 856775.906259   y: 252685.806821   time: 2052.770997

Particle-trace #92

     Coordinates of Particle-trace:
      Start   x: 856745.334480   y: 253409.259323   time: 0.000000
      End     x: 856752.853958   y: 252681.733329   time: 2285.608578

Particle-trace #93

     Coordinates of Particle-trace:
      Start   x: 856748.085668   y: 253410.771801   time: 0.000000
      End     x: 856706.425592   y: 252715.198383   time: 2549.788839

Particle-trace #94

     Coordinates of Particle-trace:
      Start   x: 856750.625598   y: 253412.617167   time: 0.000000
      End     x: 856691.177081   y: 252663.881683   time: 3023.142908

Particle-trace #95

     Coordinates of Particle-trace:
      Start   x: 856752.914214   y: 253414.766321   time: 0.000000
      End     x: 856762.632491   y: 252699.210501   time: 3544.886236

Particle-trace #96

     Coordinates of Particle-trace:
      Start   x: 856754.915423   y: 253417.185367   time: 0.000000
      End     x: 856732.045734   y: 253241.396825   time: 4464.253575

Particle-trace #97

     Coordinates of Particle-trace:
      Start   x: 856756.597666   y: 253419.836156   time: 0.000000
      End     x: 856713.695430   y: 252677.028766   time: 6177.073066

Particle-trace #98

     Coordinates of Particle-trace:
      Start   x: 856757.934411   y: 253422.676884   time: 0.000000
      End     x: 857214.228549   y: 252678.206313   time: 6540.178768

Particle-trace #99

     Coordinates of Particle-trace:
```

```
      Start   x: 856758.904578   y: 253425.662750   time: 0.000000
      End     x: 857436.927656   y: 252696.093932   time: 5961.398066

Particle-trace #100

     Coordinates of Particle-trace:
      Start   x: 856759.492867   y: 253428.746667   time: 0.000000
      End     x: 857553.974329   y: 252716.090841   time: 7027.632667

Particle-trace #101

     Coordinates of Particle-trace:
      Start   x: 857339.120000   y: 253556.710000   time: 0.000000
      End     x: 858178.280781   y: 254124.198309   time: 7058.765362

Particle-trace #102

     Coordinates of Particle-trace:
      Start   x: 857338.922868   y: 253559.843331   time: 0.000000
      End     x: 858304.164523   y: 254210.725706   time: 6986.544796

Particle-trace #103

     Coordinates of Particle-trace:
      Start   x: 857338.334579   y: 253562.927247   time: 0.000000
      End     x: 858369.109329   y: 254251.383293   time: 7262.201298

Particle-trace #104

     Coordinates of Particle-trace:
      Start   x: 857337.364412   y: 253565.913114   time: 0.000000
      End     x: 858403.951823   y: 254277.885177   time: 7102.739719

Particle-trace #105

     Coordinates of Particle-trace:
      Start   x: 857336.027667   y: 253568.753842   time: 0.000000
      End     x: 858419.269700   y: 254298.255839   time: 7023.779429

Particle-trace #106

     Coordinates of Particle-trace:
      Start   x: 857334.345425   y: 253571.404631   time: 0.000000
      End     x: 858419.534099   y: 254315.384166   time: 6999.491190

Particle-trace #107

     Coordinates of Particle-trace:
      Start   x: 857332.344216   y: 253573.823677   time: 0.000000
      End     x: 858407.127266   y: 254330.374674   time: 7015.803744

Particle-trace #108

     Coordinates of Particle-trace:
      Start   x: 857330.055600   y: 253575.972831   time: 0.000000
      End     x: 858384.058807   y: 254343.538200   time: 7062.845566

Particle-trace #109

     Coordinates of Particle-trace:
      Start   x: 857327.515670   y: 253577.818198   time: 0.000000
      End     x: 858352.656148   y: 254354.861035   time: 7132.490887

Particle-trace #110

     Coordinates of Particle-trace:
      Start   x: 857324.764483   y: 253579.330676   time: 0.000000
```

```
      End     x: 858315.446156   y: 254364.308058   time: 7218.358997

Particle-trace #111

     Coordinates of Particle-trace:
      Start   x: 857321.845425   y: 253580.486413   time: 0.000000
      End     x: 858274.612151   y: 254371.969246   time: 6635.920348

Particle-trace #112

     Coordinates of Particle-trace:
      Start   x: 857318.804533   y: 253581.267181   time: 0.000000
      End     x: 858231.552858   y: 254378.056976   time: 6728.709862

Particle-trace #113

     Coordinates of Particle-trace:
      Start   x: 857315.689764   y: 253581.660668   time: 0.000000
      End     x: 858186.753473   y: 254382.834322   time: 6833.401658

Particle-trace #114

     Coordinates of Particle-trace:
      Start   x: 857312.550238   y: 253581.660668   time: 0.000000
      End     x: 858139.859016   y: 254386.547995   time: 6952.999508

Particle-trace #115

     Coordinates of Particle-trace:
      Start   x: 857309.435468   y: 253581.267181   time: 0.000000
      End     x: 858089.806435   y: 254389.387279   time: 7092.020254

Particle-trace #116

     Coordinates of Particle-trace:
      Start   x: 857306.394576   y: 253580.486413   time: 0.000000
      End     x: 858034.957439   y: 254391.464983   time: 7256.577153

Particle-trace #117

     Coordinates of Particle-trace:
      Start   x: 857303.475518   y: 253579.330677   time: 0.000000
      End     x: 857973.235473   y: 254392.811827   time: 6596.025384

Particle-trace #118

     Coordinates of Particle-trace:
      Start   x: 857300.724331   y: 253577.818199   time: 0.000000
      End     x: 857902.327926   y: 254393.372993   time: 6803.406462

Particle-trace #119

     Coordinates of Particle-trace:
      Start   x: 857298.184401   y: 253575.972832   time: 0.000000
      End     x: 857820.047097   y: 254392.996486   time: 7062.733022

Particle-trace #120

     Coordinates of Particle-trace:
      Start   x: 857295.895785   y: 253573.823678   time: 0.000000
      End     x: 857724.817103   y: 254391.381500   time: 6268.011826

Particle-trace #121

     Coordinates of Particle-trace:
      Start   x: 857293.894576   y: 253571.404632   time: 0.000000
      End     x: 857615.936622   y: 254387.963093   time: 6574.173635
```

```
Particle-trace #122

     Coordinates of Particle-trace:
      Start   x: 857292.212334   y: 253568.753843   time: 0.000000
      End     x: 857492.958177   y: 254381.739867   time: 6983.789188

Particle-trace #123

     Coordinates of Particle-trace:
      Start   x: 857290.875588   y: 253565.913115   time: 0.000000
      End     x: 857353.441523   y: 254370.940479   time: 5054.291120

Particle-trace #124

     Coordinates of Particle-trace:
      Start   x: 857289.905421   y: 253562.927248   time: 0.000000
      End     x: 857187.368890   y: 254351.435551   time: 4871.107265

Particle-trace #125

     Coordinates of Particle-trace:
      Start   x: 857289.317133   y: 253559.843332   time: 0.000000
      End     x: 856931.760196   y: 254314.878935   time: 6480.500779

Particle-trace #126

     Coordinates of Particle-trace:
      Start   x: 857289.120000   y: 253556.710001   time: 0.000000
      End     x: 856234.145194   y: 254249.935318   time: 6714.268873

Particle-trace #127

     Coordinates of Particle-trace:
      Start   x: 857289.317132   y: 253553.576671   time: 0.000000
      End     x: 856362.520506   y: 254260.288028   time: 6404.675462

Particle-trace #128

     Coordinates of Particle-trace:
      Start   x: 857289.905421   y: 253550.492754   time: 0.000000
      End     x: 857739.105511   y: 252806.788441   time: 7265.258227

Particle-trace #129

     Coordinates of Particle-trace:
      Start   x: 857290.875587   y: 253547.506888   time: 0.000000
      End     x: 857881.631387   y: 252785.205909   time: 6501.751710

Particle-trace #130

     Coordinates of Particle-trace:
      Start   x: 857292.212332   y: 253544.666160   time: 0.000000
      End     x: 857968.834907   y: 252784.158347   time: 7174.694818

Particle-trace #131

     Coordinates of Particle-trace:
      Start   x: 857293.894574   y: 253542.015370   time: 0.000000
      End     x: 858043.307621   y: 252787.042159   time: 7017.269759

Particle-trace #132

     Coordinates of Particle-trace:
      Start   x: 857295.895783   y: 253539.596324   time: 0.000000
      End     x: 858109.908368   y: 252791.670114   time: 6893.682602
```

Particle-trace #133

Coordinates of Particle-trace:
Start x: 857298.184399 y: 253537.447170 time: 0.000000
End x: 858168.942079 y: 252797.171730 time: 6786.946734

Particle-trace #134

Coordinates of Particle-trace:
Start x: 857300.724329 y: 253535.601803 time: 0.000000
End x: 858220.697086 y: 252803.137039 time: 6692.268476

Particle-trace #135

Coordinates of Particle-trace:
Start x: 857303.475516 y: 253534.089324 time: 0.000000
End x: 858266.058366 y: 252809.389656 time: 7295.680031

Particle-trace #136

Coordinates of Particle-trace:
Start x: 857306.394573 y: 253532.933588 time: 0.000000
End x: 858306.232413 y: 252815.897621 time: 7208.147790

Particle-trace #137

Coordinates of Particle-trace:
Start x: 857309.435465 y: 253532.152819 time: 0.000000
End x: 858342.422496 y: 252822.726286 time: 7131.877036

Particle-trace #138

Coordinates of Particle-trace:
Start x: 857312.550235 y: 253531.759332 time: 0.000000
End x: 858375.628750 y: 252830.007241 time: 7065.700654

Particle-trace #139

Coordinates of Particle-trace:
Start x: 857315.689761 y: 253531.759332 time: 0.000000
End x: 858406.536161 y: 252837.916522 time: 7008.692094

Particle-trace #140

Coordinates of Particle-trace:
Start x: 857318.804531 y: 253532.152818 time: 0.000000
End x: 858435.427680 y: 252846.655800 time: 6960.393117

Particle-trace #141

Coordinates of Particle-trace:
Start x: 857321.845423 y: 253532.933586 time: 0.000000
End x: 858462.083792 y: 252856.431736 time: 6921.126812

Particle-trace #142

Coordinates of Particle-trace:
Start x: 857324.764480 y: 253534.089323 time: 0.000000
End x: 858485.657944 y: 252867.431398 time: 6892.464835

Particle-trace #143

Coordinates of Particle-trace:
Start x: 857327.515668 y: 253535.601801 time: 0.000000
End x: 858504.546430 y: 252879.800343 time: 6877.916757

Particle-trace #144

```
     Coordinates of Particle-trace:
      Start   x: 857330.055598   y: 253537.447167   time: 0.000000
      End     x: 858516.299622   y: 252893.653435   time: 6883.866306

Particle-trace #145

     Coordinates of Particle-trace:
      Start   x: 857332.344214   y: 253539.596321   time: 0.000000
      End     x: 858517.582408   y: 252909.190752   time: 6920.838289

Particle-trace #146

     Coordinates of Particle-trace:
      Start   x: 857334.345423   y: 253542.015367   time: 0.000000
      End     x: 858503.956021   y: 252927.052923   time: 7005.838968

Particle-trace #147

     Coordinates of Particle-trace:
      Start   x: 857336.027666   y: 253544.666156   time: 0.000000
      End     x: 858468.717465   y: 252949.254334   time: 7168.792490

Particle-trace #148

     Coordinates of Particle-trace:
      Start   x: 857337.364411   y: 253547.506884   time: 0.000000
      End     x: 858398.604638   y: 252982.275888   time: 6925.412539

Particle-trace #149

     Coordinates of Particle-trace:
      Start   x: 857338.334578   y: 253550.492750   time: 0.000000
      End     x: 858255.883968   y: 253054.651867   time: 7041.884997

Particle-trace #150

     Coordinates of Particle-trace:
      Start   x: 857338.922867   y: 253553.576667   time: 0.000000
      End     x: 857887.767838   y: 253569.745580   time: 3996.851310

Particle-trace #151

     Coordinates of Particle-trace:
      Start   x: 858256.460000   y: 253590.270000   time: 0.000000
      End     x: 859982.268566   y: 253645.762590   time: 7023.850011

Particle-trace #152

     Coordinates of Particle-trace:
      Start   x: 858256.262868   y: 253593.403331   time: 0.000000
      End     x: 859980.592120   y: 253668.789160   time: 7027.712140

Particle-trace #153

     Coordinates of Particle-trace:
      Start   x: 858255.674579   y: 253596.487247   time: 0.000000
      End     x: 859977.318798   y: 253692.260461   time: 7034.013150

Particle-trace #154

     Coordinates of Particle-trace:
      Start   x: 858254.704412   y: 253599.473114   time: 0.000000
      End     x: 859972.261176   y: 253716.555558   time: 7041.986370

Particle-trace #155
```

```
     Coordinates of Particle-trace:
      Start   x: 858253.367667   y: 253602.313842   time: 0.000000
      End     x: 859965.147232   y: 253741.951227   time: 7050.441813

Particle-trace #156

     Coordinates of Particle-trace:
      Start   x: 858251.685425   y: 253604.964631   time: 0.000000
      End     x: 859955.669537   y: 253768.549647   time: 7057.927527

Particle-trace #157

     Coordinates of Particle-trace:
      Start   x: 858249.684216   y: 253607.383677   time: 0.000000
      End     x: 859943.573749   y: 253796.201339   time: 7063.072862

Particle-trace #158

     Coordinates of Particle-trace:
      Start   x: 858247.395600   y: 253609.532831   time: 0.000000
      End     x: 859928.770270   y: 253824.476886   time: 7065.078876

Particle-trace #159

     Coordinates of Particle-trace:
      Start   x: 858244.855670   y: 253611.378198   time: 0.000000
      End     x: 859911.407398   y: 253852.749172   time: 7064.129603

Particle-trace #160

     Coordinates of Particle-trace:
      Start   x: 858242.104483   y: 253612.890676   time: 0.000000
      End     x: 859891.837040   y: 253880.380667   time: 7061.441410

Particle-trace #161

     Coordinates of Particle-trace:
      Start   x: 858239.185425   y: 253614.046413   time: 0.000000
      End     x: 859870.473888   y: 253906.917794   time: 7058.905108

Particle-trace #162

     Coordinates of Particle-trace:
      Start   x: 858236.144533   y: 253614.827181   time: 0.000000
      End     x: 859847.625217   y: 253932.193249   time: 7058.576343

Particle-trace #163

     Coordinates of Particle-trace:
      Start   x: 858233.029764   y: 253615.220668   time: 0.000000
      End     x: 859823.360930   y: 253956.325511   time: 7062.303442

Particle-trace #164

     Coordinates of Particle-trace:
      Start   x: 858229.890238   y: 253615.220668   time: 0.000000
      End     x: 859797.433561   y: 253979.667394   time: 7071.592358

Particle-trace #165

     Coordinates of Particle-trace:
      Start   x: 858226.775468   y: 253614.827181   time: 0.000000
      End     x: 859769.222727   y: 254002.748077   time: 7087.653698

Particle-trace #166

     Coordinates of Particle-trace:
```

```
      Start   x: 858223.734576   y: 253614.046413   time: 0.000000
      End     x: 859737.679370   y: 254026.221240   time: 7111.562750

Particle-trace #167

     Coordinates of Particle-trace:
      Start   x: 858220.815518   y: 253612.890677   time: 0.000000
      End     x: 859701.260102   y: 254050.809208   time: 7144.532600

Particle-trace #168

     Coordinates of Particle-trace:
      Start   x: 858218.064331   y: 253611.378199   time: 0.000000
      End     x: 859657.875539   y: 254077.213258   time: 7188.386365

Particle-trace #169

     Coordinates of Particle-trace:
      Start   x: 858215.524401   y: 253609.532832   time: 0.000000
      End     x: 859604.949889   y: 254105.938846   time: 7246.351262

Particle-trace #170

     Coordinates of Particle-trace:
      Start   x: 858213.235785   y: 253607.383678   time: 0.000000
      End     x: 859539.766497   y: 254137.003552   time: 6731.250855

Particle-trace #171

     Coordinates of Particle-trace:
      Start   x: 858211.234576   y: 253604.964632   time: 0.000000
      End     x: 859460.143849   y: 254169.638200   time: 6843.672214

Particle-trace #172

     Coordinates of Particle-trace:
      Start   x: 858209.552334   y: 253602.313843   time: 0.000000
      End     x: 859364.855722   y: 254202.302622   time: 6996.710830

Particle-trace #173

     Coordinates of Particle-trace:
      Start   x: 858208.215588   y: 253599.473115   time: 0.000000
      End     x: 859252.516089   y: 254233.170807   time: 7206.552979

Particle-trace #174

     Coordinates of Particle-trace:
      Start   x: 858207.245421   y: 253596.487248   time: 0.000000
      End     x: 859117.813381   y: 254260.470348   time: 6945.970739

Particle-trace #175

     Coordinates of Particle-trace:
      Start   x: 858206.657133   y: 253593.403332   time: 0.000000
      End     x: 858941.825756   y: 254281.031700   time: 6868.528651

Particle-trace #176

     Coordinates of Particle-trace:
      Start   x: 858206.460000   y: 253590.270001   time: 0.000000
      End     x: 858639.367427   y: 254273.872301   time: 6830.183351

Particle-trace #177

     Coordinates of Particle-trace:
      Start   x: 858206.657132   y: 253587.136671   time: 0.000000
```

```
      End     x: 858624.455704   y: 252963.751377   time: 7243.687207

Particle-trace #178

     Coordinates of Particle-trace:
      Start   x: 858207.245421   y: 253584.052754   time: 0.000000
      End     x: 859023.019346   y: 252972.342401   time: 6822.875094

Particle-trace #179

     Coordinates of Particle-trace:
      Start   x: 858208.215587   y: 253581.066888   time: 0.000000
      End     x: 859216.728189   y: 253009.084871   time: 6823.831335

Particle-trace #180

     Coordinates of Particle-trace:
      Start   x: 858209.552332   y: 253578.226160   time: 0.000000
      End     x: 859356.095628   y: 253048.486805   time: 7060.463170

Particle-trace #181

     Coordinates of Particle-trace:
      Start   x: 858211.234574   y: 253575.575370   time: 0.000000
      End     x: 859466.334059   y: 253088.394061   time: 6854.043556

Particle-trace #182

     Coordinates of Particle-trace:
      Start   x: 858213.235783   y: 253573.156324   time: 0.000000
      End     x: 859554.788337   y: 253127.114668   time: 7295.542683

Particle-trace #183

     Coordinates of Particle-trace:
      Start   x: 858215.524399   y: 253571.007170   time: 0.000000
      End     x: 859625.041294   y: 253163.123317   time: 7203.167813

Particle-trace #184

     Coordinates of Particle-trace:
      Start   x: 858218.064329   y: 253569.161803   time: 0.000000
      End     x: 859680.569965   y: 253195.708462   time: 7137.876819

Particle-trace #185

     Coordinates of Particle-trace:
      Start   x: 858220.815516   y: 253567.649324   time: 0.000000
      End     x: 859724.988747   y: 253225.062314   time: 7090.606825

Particle-trace #186

     Coordinates of Particle-trace:
      Start   x: 858223.734573   y: 253566.493588   time: 0.000000
      End     x: 859761.494017   y: 253251.923552   time: 7056.394967

Particle-trace #187

     Coordinates of Particle-trace:
      Start   x: 858226.775465   y: 253565.712819   time: 0.000000
      End     x: 859792.572027   y: 253277.219232   time: 7032.630147

Particle-trace #188

     Coordinates of Particle-trace:
      Start   x: 858229.890235   y: 253565.319332   time: 0.000000
      End     x: 859820.001825   y: 253301.860964   time: 7017.771021
```

```
Particle-trace #189

     Coordinates of Particle-trace:
      Start   x: 858233.029761   y: 253565.319332   time: 0.000000
      End     x: 859844.957883   y: 253326.647101   time: 7010.600621

Particle-trace #190

     Coordinates of Particle-trace:
      Start   x: 858236.144531   y: 253565.712818   time: 0.000000
      End     x: 859868.108361   y: 253352.202139   time: 7009.810629

Particle-trace #191

     Coordinates of Particle-trace:
      Start   x: 858239.185423   y: 253566.493586   time: 0.000000
      End     x: 859889.693628   y: 253378.918384   time: 7013.766113

Particle-trace #192

     Coordinates of Particle-trace:
      Start   x: 858242.104480   y: 253567.649323   time: 0.000000
      End     x: 859909.605212   y: 253406.892212   time: 7020.425629

Particle-trace #193

     Coordinates of Particle-trace:
      Start   x: 858244.855668   y: 253569.161801   time: 0.000000
      End     x: 859927.496579   y: 253435.876079   time: 7027.492008

Particle-trace #194

     Coordinates of Particle-trace:
      Start   x: 858247.395598   y: 253571.007167   time: 0.000000
      End     x: 859942.948838   y: 253465.304330   time: 7032.856057

Particle-trace #195

     Coordinates of Particle-trace:
      Start   x: 858249.684214   y: 253573.156321   time: 0.000000
      End     x: 859955.663067   y: 253494.446516   time: 7035.195069

Particle-trace #196

     Coordinates of Particle-trace:
      Start   x: 858251.685423   y: 253575.575367   time: 0.000000
      End     x: 859965.587823   y: 253522.648487   time: 7034.358273

Particle-trace #197

     Coordinates of Particle-trace:
      Start   x: 858253.367666   y: 253578.226156   time: 0.000000
      End     x: 859972.911686   y: 253549.526173   time: 7031.253716

Particle-trace #198

     Coordinates of Particle-trace:
      Start   x: 858254.704411   y: 253581.066884   time: 0.000000
      End     x: 859977.953616   y: 253575.015982   time: 7027.345218

Particle-trace #199

     Coordinates of Particle-trace:
      Start   x: 858255.674578   y: 253584.052750   time: 0.000000
      End     x: 859981.040837   y: 253599.308767   time: 7024.113946
```

Particle-trace #200

Coordinates of Particle-trace:
Start x: 858256.262867 y: 253587.136667 time: 0.000000
End x: 859982.429307 y: 253622.750532 time: 7022.717382

Particle-trace #201

Coordinates of Particle-trace:
Start x: 853957.780000 y: 252834.450000 time: 0.000000
End x: 856368.979094 y: 252820.211654 time: 7170.293572

Particle-trace #202

Coordinates of Particle-trace:
Start x: 853957.582868 y: 252837.583331 time: 0.000000
End x: 856324.906482 y: 252835.212876 time: 7251.110961

Particle-trace #203

Coordinates of Particle-trace:
Start x: 853956.994579 y: 252840.667247 time: 0.000000
End x: 856269.854326 y: 252851.311415 time: 7085.249323

Particle-trace #204

Coordinates of Particle-trace:
Start x: 853956.024412 y: 252843.653114 time: 0.000000
End x: 856194.350368 y: 252868.446778 time: 7238.695832

Particle-trace #205

Coordinates of Particle-trace:
Start x: 853954.687667 y: 252846.493842 time: 0.000000
End x: 856066.071869 y: 252885.783486 time: 7250.383940

Particle-trace #206

Coordinates of Particle-trace:
Start x: 853953.005425 y: 252849.144631 time: 0.000000
End x: 855482.978818 y: 253288.490554 time: 4958.136344

Particle-trace #207

Coordinates of Particle-trace:
Start x: 853951.004216 y: 252851.563677 time: 0.000000
End x: 855898.207555 y: 253607.296913 time: 7066.809279

Particle-trace #208

Coordinates of Particle-trace:
Start x: 853948.715600 y: 252853.712831 time: 0.000000
End x: 855979.064791 y: 253639.207046 time: 7126.384014

Particle-trace #209

Coordinates of Particle-trace:
Start x: 853946.175670 y: 252855.558198 time: 0.000000
End x: 856016.878228 y: 253661.076555 time: 6997.132211

Particle-trace #210

Coordinates of Particle-trace:
Start x: 853943.424483 y: 252857.070676 time: 0.000000
End x: 856037.119638 y: 253678.187693 time: 7251.703991

Particle-trace #211

```
     Coordinates of Particle-trace:
      Start   x: 853940.505425   y: 252858.226413   time: 0.000000
      End     x: 856047.721602   y: 253692.040494   time: 7193.222478

Particle-trace #212

     Coordinates of Particle-trace:
      Start   x: 853937.464533   y: 252859.007181   time: 0.000000
      End     x: 856052.299004   y: 253703.421654   time: 7151.729744

Particle-trace #213

     Coordinates of Particle-trace:
      Start   x: 853934.349764   y: 252859.400668   time: 0.000000
      End     x: 856052.768216   y: 253712.882531   time: 7122.804099

Particle-trace #214

     Coordinates of Particle-trace:
      Start   x: 853931.210238   y: 252859.400668   time: 0.000000
      End     x: 856050.167851   y: 253720.853640   time: 7103.740411

Particle-trace #215

     Coordinates of Particle-trace:
      Start   x: 853928.095468   y: 252859.007181   time: 0.000000
      End     x: 856044.986406   y: 253727.671757   time: 7092.639708

Particle-trace #216

     Coordinates of Particle-trace:
      Start   x: 853925.054576   y: 252858.226413   time: 0.000000
      End     x: 856037.313997   y: 253733.580879   time: 7088.030428

Particle-trace #217

     Coordinates of Particle-trace:
      Start   x: 853922.135518   y: 252857.070677   time: 0.000000
      End     x: 856026.923911   y: 253738.724315   time: 7088.724654

Particle-trace #218

     Coordinates of Particle-trace:
      Start   x: 853919.384331   y: 252855.558199   time: 0.000000
      End     x: 856013.334341   y: 253743.134262   time: 7093.831797

Particle-trace #219

     Coordinates of Particle-trace:
      Start   x: 853916.844401   y: 252853.712832   time: 0.000000
      End     x: 855995.886482   y: 253746.725630   time: 7102.993075

Particle-trace #220

     Coordinates of Particle-trace:
      Start   x: 853914.555785   y: 252851.563678   time: 0.000000
      End     x: 855973.851538   y: 253749.307272   time: 7116.871407

Particle-trace #221

     Coordinates of Particle-trace:
      Start   x: 853912.554576   y: 252849.144632   time: 0.000000
      End     x: 855946.545330   y: 253750.611466   time: 7137.528277

Particle-trace #222
```

```
     Coordinates of Particle-trace:
      Start   x: 853910.872334   y: 252846.493843   time: 0.000000
      End     x: 855913.426598   y: 253750.327601   time: 7167.967684

Particle-trace #223

     Coordinates of Particle-trace:
      Start   x: 853909.535588   y: 252843.653115   time: 0.000000
      End     x: 855874.055910   y: 253748.124336   time: 7211.405877

Particle-trace #224

     Coordinates of Particle-trace:
      Start   x: 853908.565421   y: 252840.667248   time: 0.000000
      End     x: 855827.510930   y: 253743.582935   time: 7272.604164

Particle-trace #225

     Coordinates of Particle-trace:
      Start   x: 853907.977133   y: 252837.583332   time: 0.000000
      End     x: 855770.778985   y: 253735.809763   time: 7040.626313

Particle-trace #226

     Coordinates of Particle-trace:
      Start   x: 853907.780000   y: 252834.450001   time: 0.000000
      End     x: 855694.742073   y: 253722.106831   time: 7198.418818

Particle-trace #227

     Coordinates of Particle-trace:
      Start   x: 853907.977132   y: 252831.316671   time: 0.000000
      End     x: 855561.299561   y: 253689.985509   time: 7263.378268

Particle-trace #228

     Coordinates of Particle-trace:
      Start   x: 853908.565421   y: 252828.232754   time: 0.000000
      End     x: 855363.717758   y: 252639.324646   time: 7189.242754

Particle-trace #229

     Coordinates of Particle-trace:
      Start   x: 853909.535587   y: 252825.246888   time: 0.000000
      End     x: 855983.276802   y: 252684.596743   time: 7025.155261

Particle-trace #230

     Coordinates of Particle-trace:
      Start   x: 853910.872332   y: 252822.406160   time: 0.000000
      End     x: 856129.198260   y: 252698.537766   time: 7285.123128

Particle-trace #231

     Coordinates of Particle-trace:
      Start   x: 853912.554574   y: 252819.755370   time: 0.000000
      End     x: 856222.177771   y: 252707.840078   time: 7146.499955

Particle-trace #232

     Coordinates of Particle-trace:
      Start   x: 853914.555783   y: 252817.336324   time: 0.000000
      End     x: 856290.435687   y: 252714.228579   time: 7061.214633

Particle-trace #233

     Coordinates of Particle-trace:
```

```
      Start   x: 853916.844399   y: 252815.187170   time: 0.000000
      End     x: 856343.026288   y: 252718.613925   time: 7256.443313

Particle-trace #234

     Coordinates of Particle-trace:
      Start   x: 853919.384329   y: 252813.341803   time: 0.000000
      End     x: 856384.905035   y: 252721.635609   time: 7211.257580

Particle-trace #235

     Coordinates of Particle-trace:
      Start   x: 853922.135516   y: 252811.829324   time: 0.000000
      End     x: 856419.225454   y: 252723.736424   time: 7177.078148

Particle-trace #236

     Coordinates of Particle-trace:
      Start   x: 853925.054573   y: 252810.673588   time: 0.000000
      End     x: 856448.083274   y: 252725.221720   time: 7150.859805

Particle-trace #237

     Coordinates of Particle-trace:
      Start   x: 853928.095465   y: 252809.892819   time: 0.000000
      End     x: 856472.869541   y: 252726.310938   time: 7131.030567

Particle-trace #238

     Coordinates of Particle-trace:
      Start   x: 853931.210235   y: 252809.499332   time: 0.000000
      End     x: 856494.421217   y: 252727.179492   time: 7116.785067

Particle-trace #239

     Coordinates of Particle-trace:
      Start   x: 853934.349761   y: 252809.499332   time: 0.000000
      End     x: 856513.069933   y: 252727.999290   time: 7107.743490

Particle-trace #240

     Coordinates of Particle-trace:
      Start   x: 853937.464531   y: 252809.892818   time: 0.000000
      End     x: 856528.649218   y: 252728.983467   time: 7103.768237

Particle-trace #241

     Coordinates of Particle-trace:
      Start   x: 853940.505423   y: 252810.673586   time: 0.000000
      End     x: 856540.515305   y: 252730.431984   time: 7104.843387

Particle-trace #242

     Coordinates of Particle-trace:
      Start   x: 853943.424480   y: 252811.829323   time: 0.000000
      End     x: 856547.663668   y: 252732.754729   time: 7110.981971

Particle-trace #243

     Coordinates of Particle-trace:
      Start   x: 853946.175668   y: 252813.341801   time: 0.000000
      End     x: 856549.023147   y: 252736.426996   time: 7122.163528

Particle-trace #244

     Coordinates of Particle-trace:
      Start   x: 853948.715598   y: 252815.187167   time: 0.000000
```

```
      End     x: 856543.903647   y: 252741.849911   time: 7138.318036

Particle-trace #245

     Coordinates of Particle-trace:
      Start   x: 853951.004214   y: 252817.336321   time: 0.000000
      End     x: 856532.358010   y: 252749.181322   time: 7159.366586

Particle-trace #246

     Coordinates of Particle-trace:
      Start   x: 853953.005423   y: 252819.755367   time: 0.000000
      End     x: 856515.151073   y: 252758.279075   time: 7185.322912

Particle-trace #247

     Coordinates of Particle-trace:
      Start   x: 853954.687666   y: 252822.406156   time: 0.000000
      End     x: 856493.338378   y: 252768.811393   time: 7216.447260

Particle-trace #248

     Coordinates of Particle-trace:
      Start   x: 853956.024411   y: 252825.246884   time: 0.000000
      End     x: 856467.780489   y: 252780.433297   time: 7253.421149

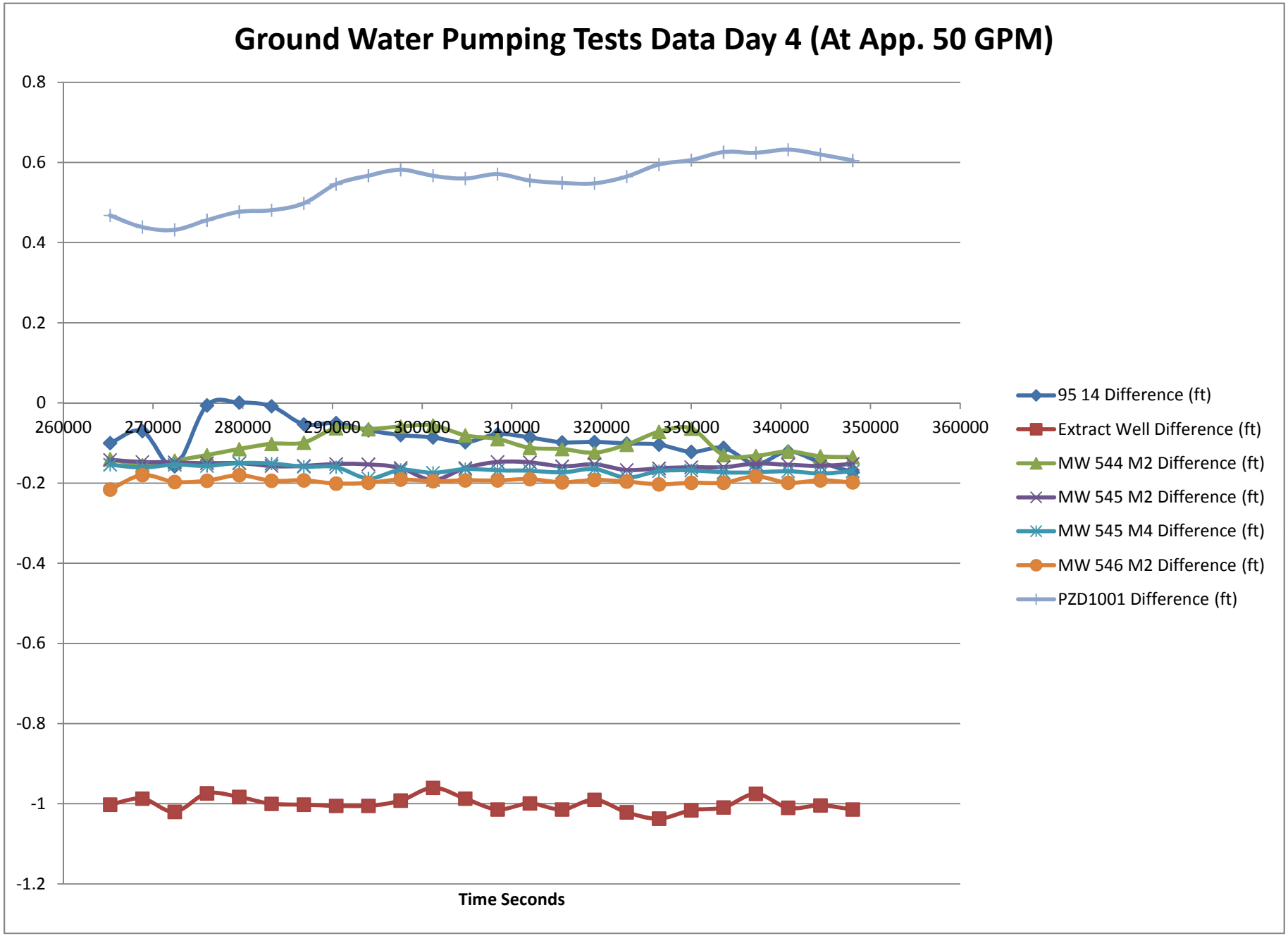
Particle-trace #249

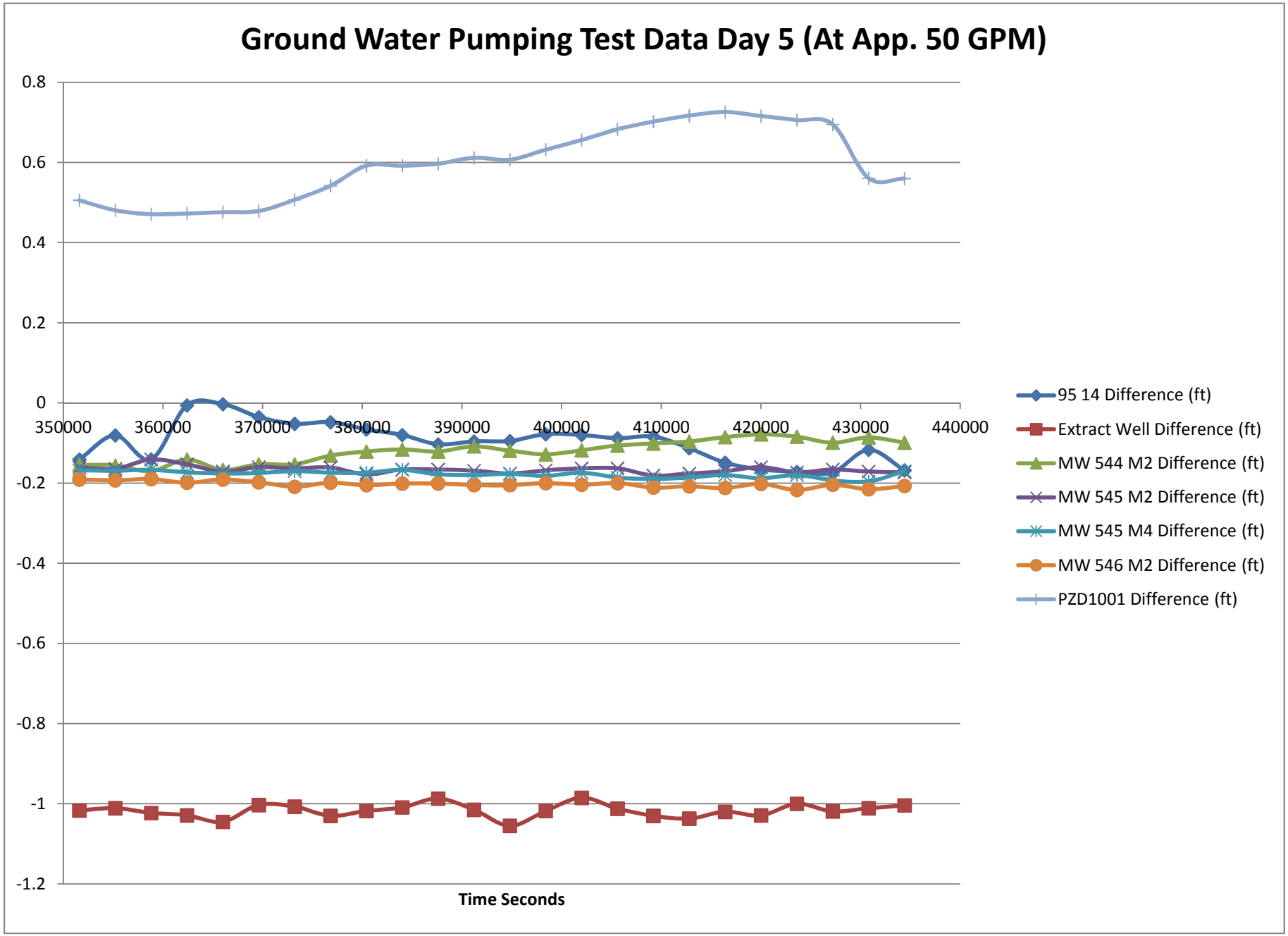
     Coordinates of Particle-trace:
      Start   x: 853956.994578   y: 252828.232750   time: 0.000000
      End     x: 856438.840811   y: 252792.909244   time: 7297.527416

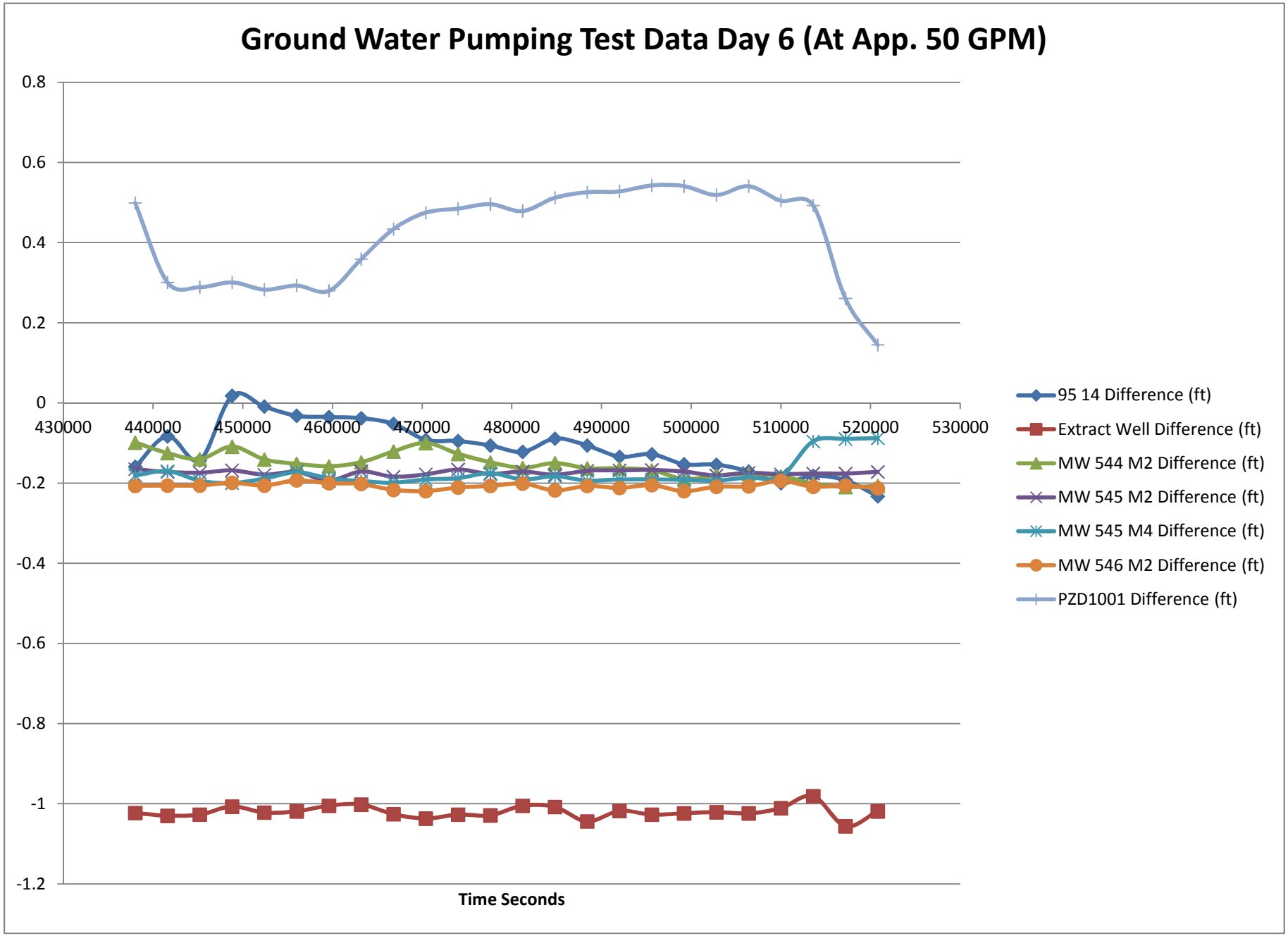
Particle-trace #250

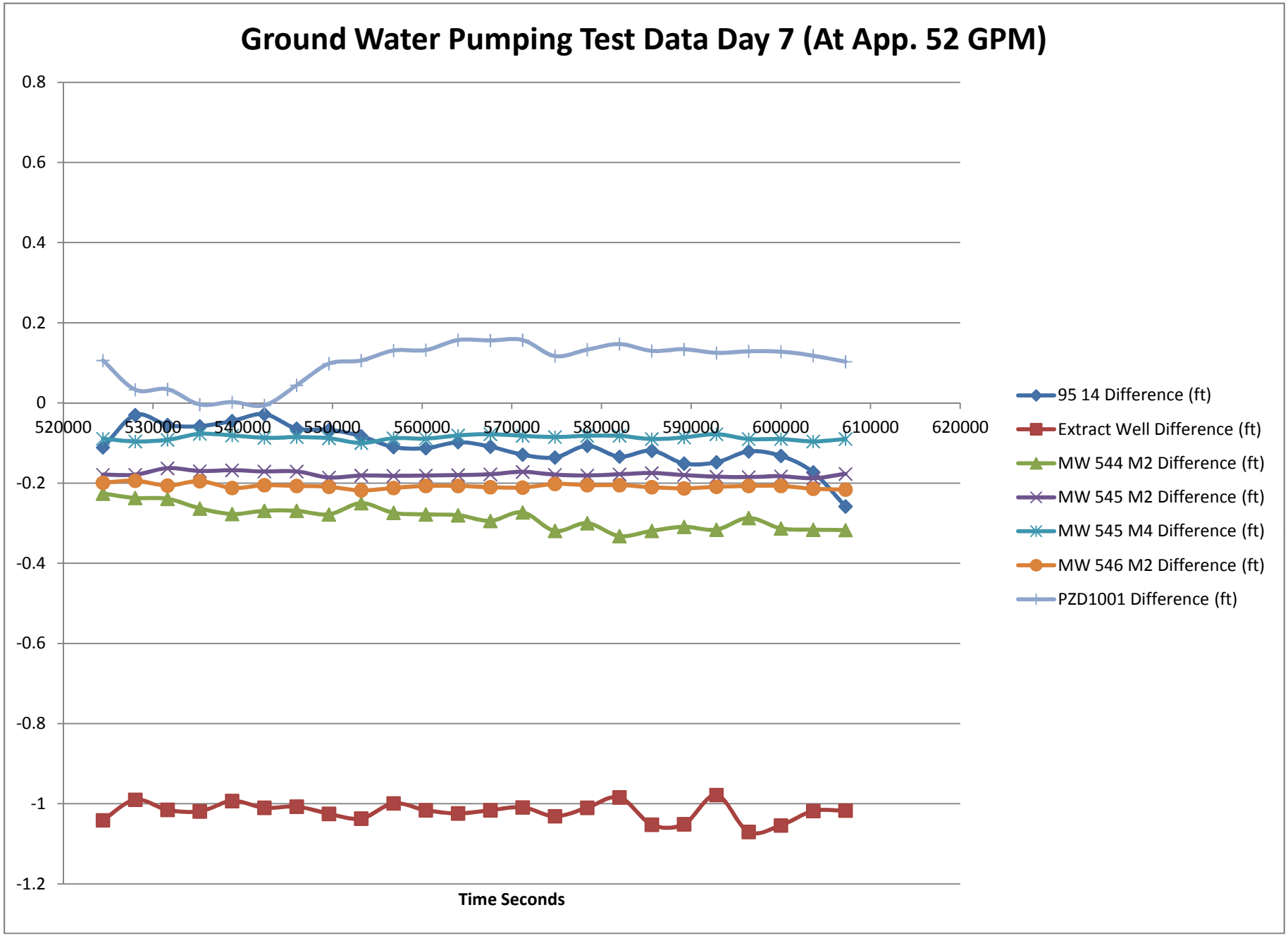
Coordinates of Particle-trace:
 Start   x: 853957.582867   y: 252831.316667   time: 0.000000
 End     x: 856406.249009   y: 252806.156662   time: 7107.385240
```

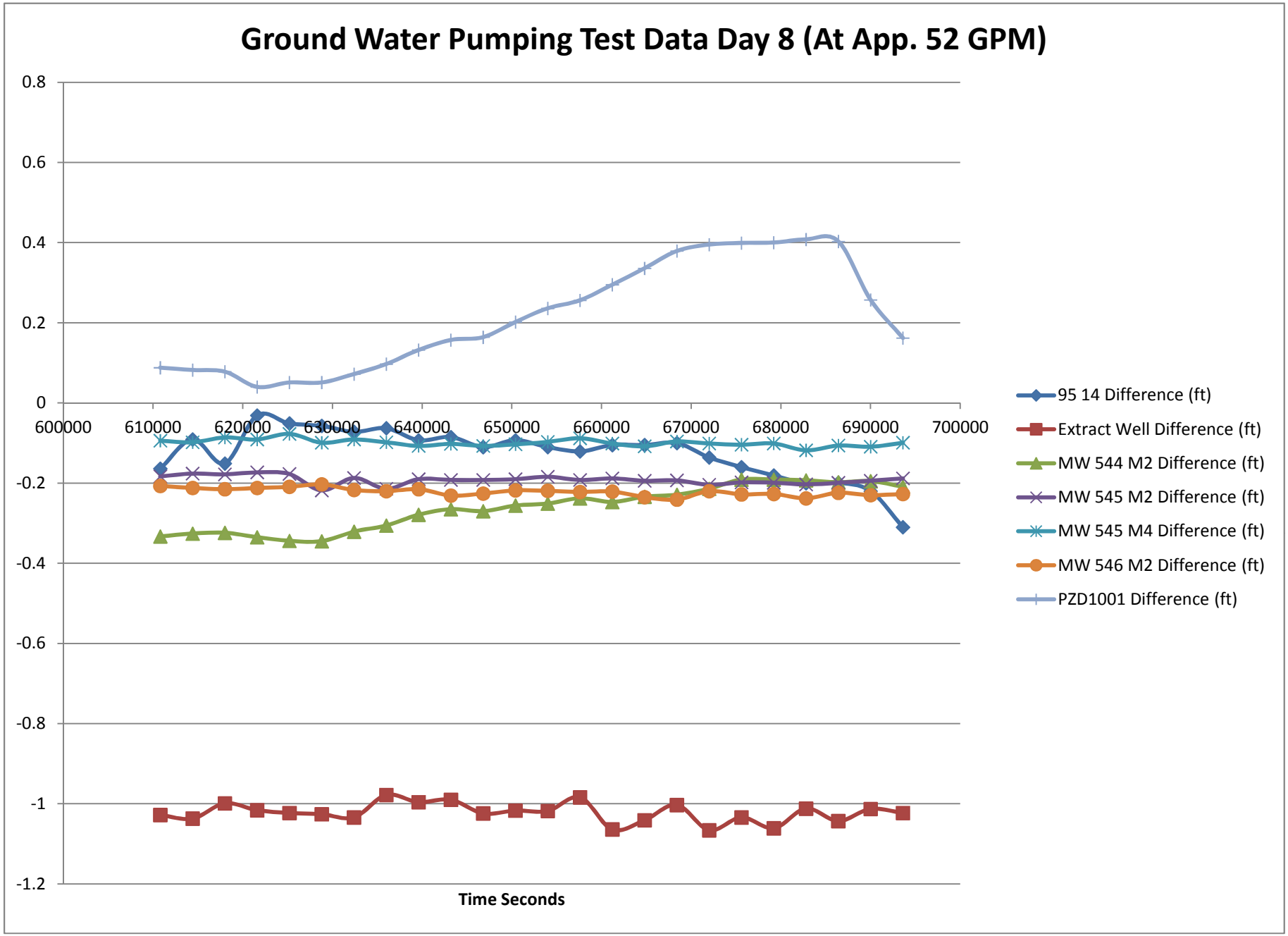
APPENDIX B
BASE BOUNDARY SYSTEM STARTUP PRESSURE TRANSDUCER DATA PLOTS

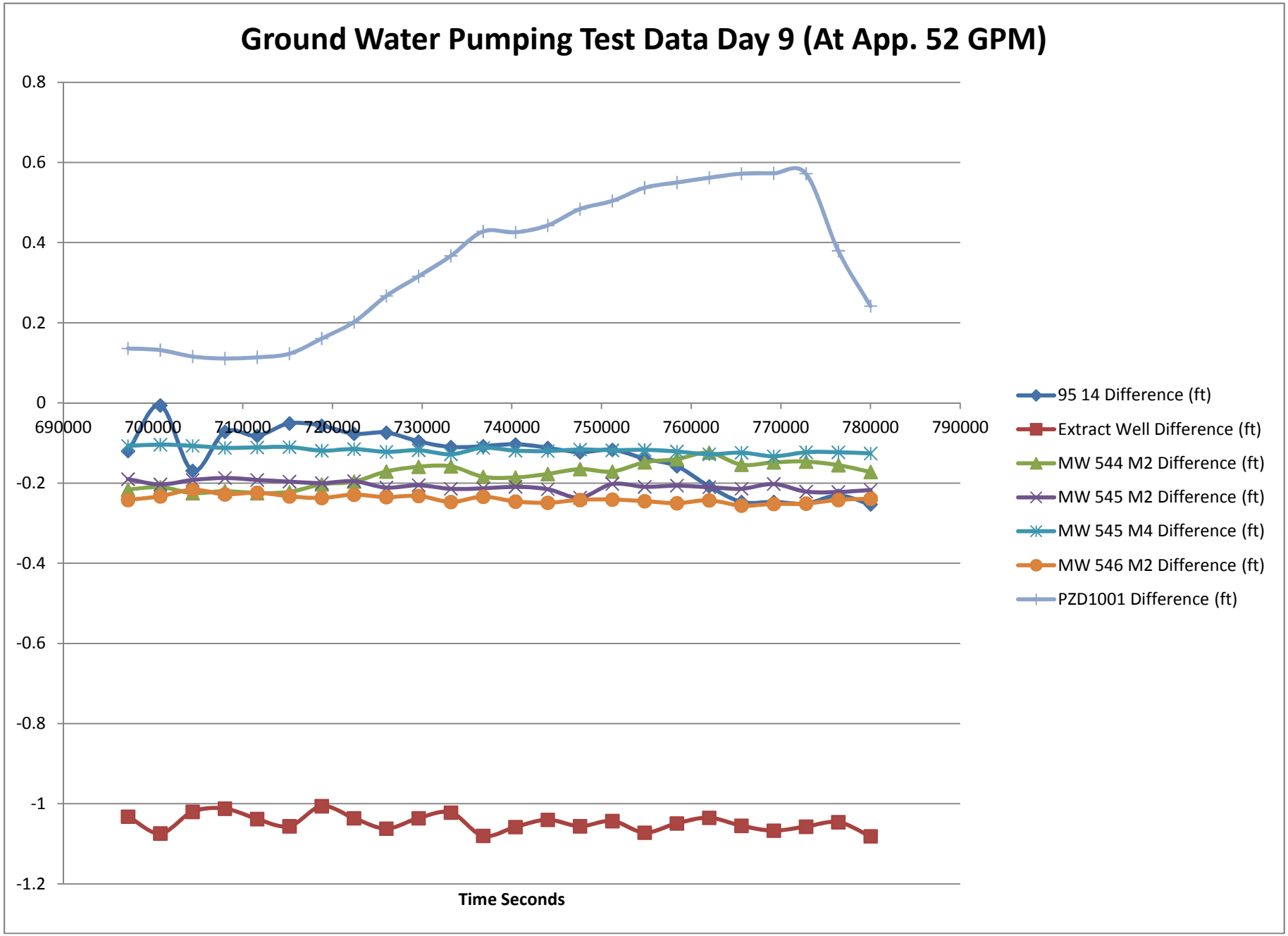

Ground Water Pumping Tests Data Day 4 (At App. 50 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
260000
270000
280000
290000
300000
310000
320000
330000
340000
350000
360000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)

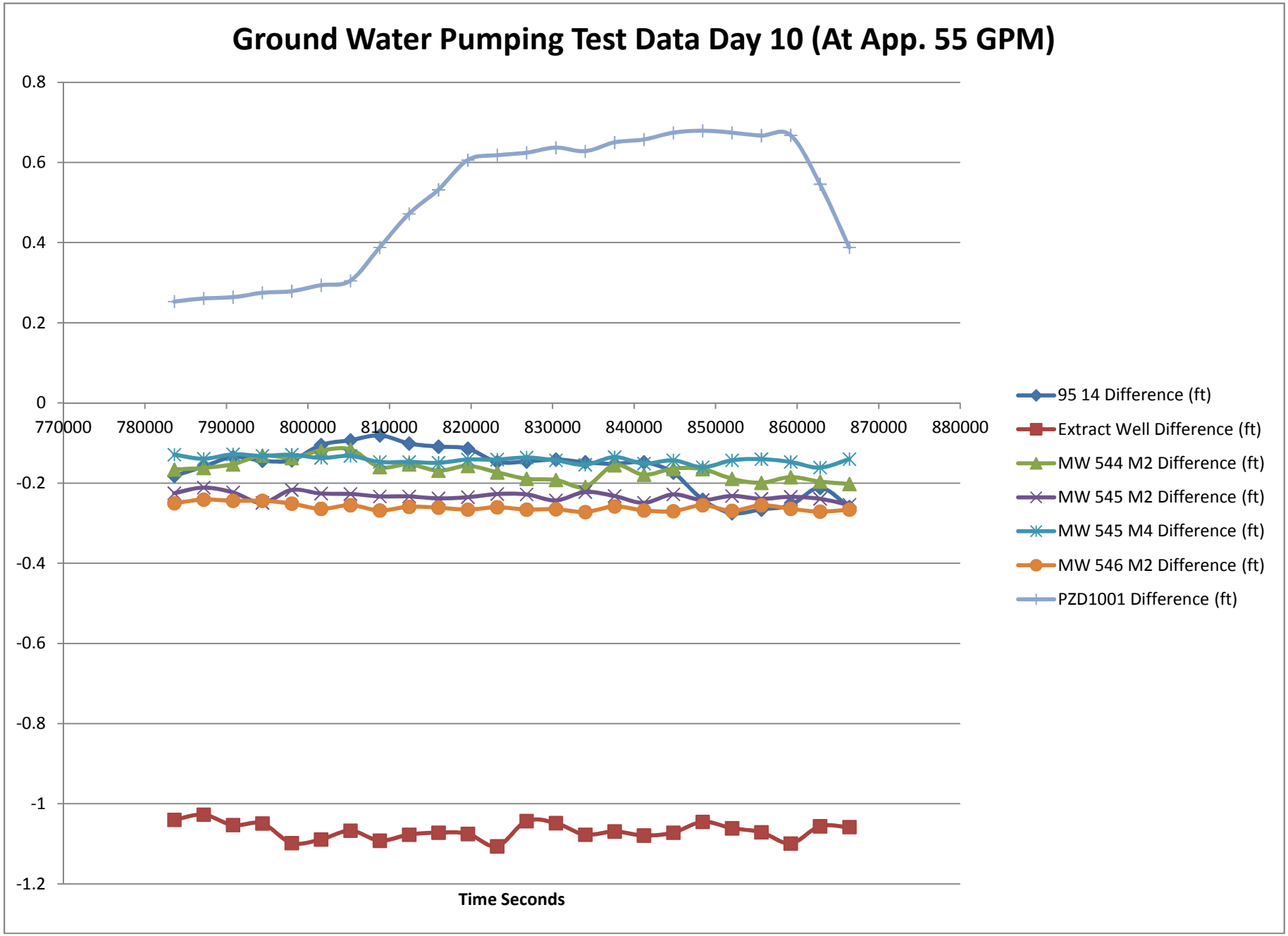

Ground Water Pumping Test Data Day 5 (At App. 50 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
350000
360000
370000
380000
390000
400000
410000
420000
430000
440000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)

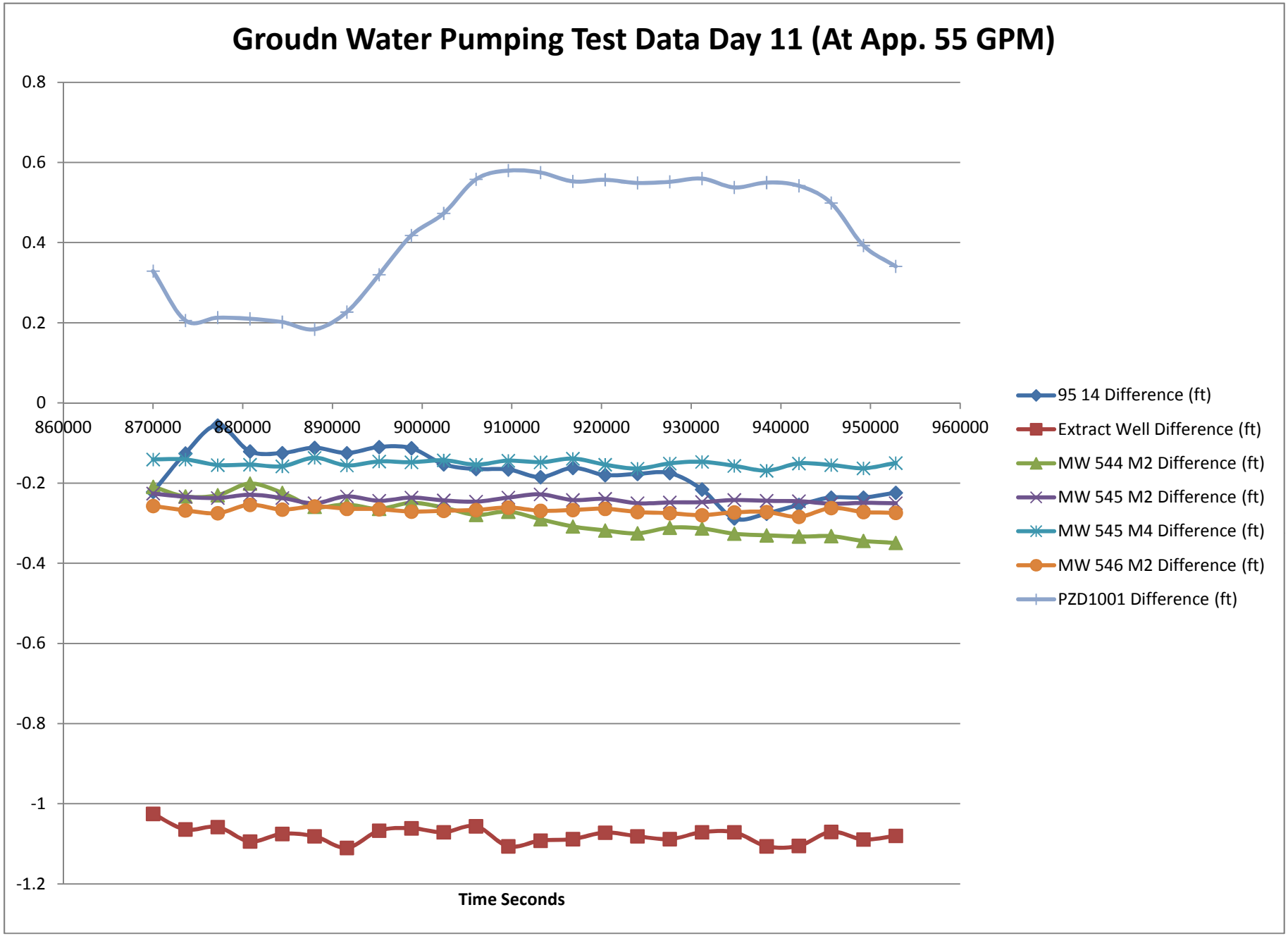

Ground Water Pumping Test Data Day 6 (At App. 50 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
430000
440000
450000
460000
470000
480000
490000
500000
510000
520000
530000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)

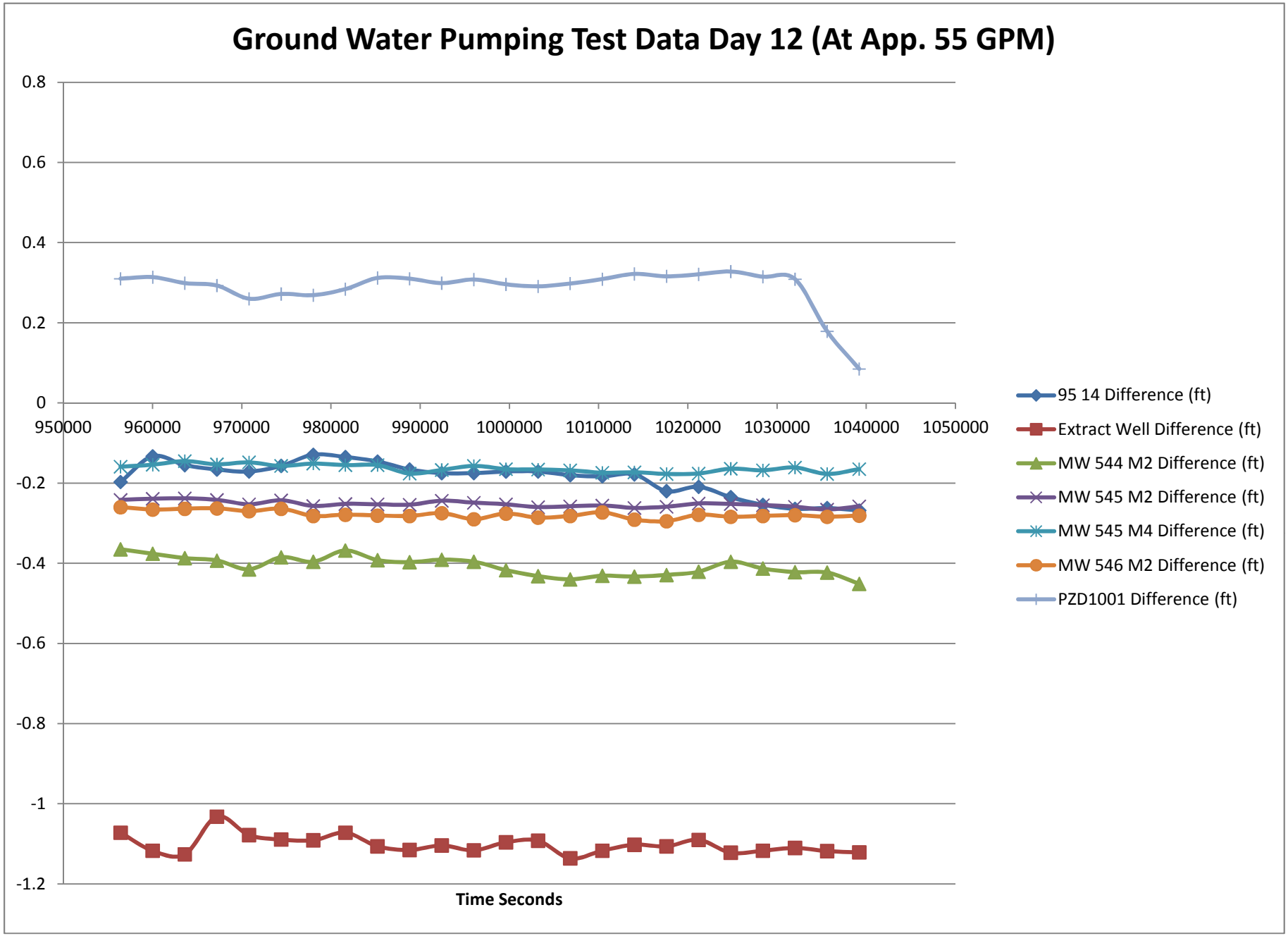

Ground Water Pumping Test Data Day 7 (At App. 52 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
520000
530000
540000
550000
560000
570000
580000
590000
600000
610000
620000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)

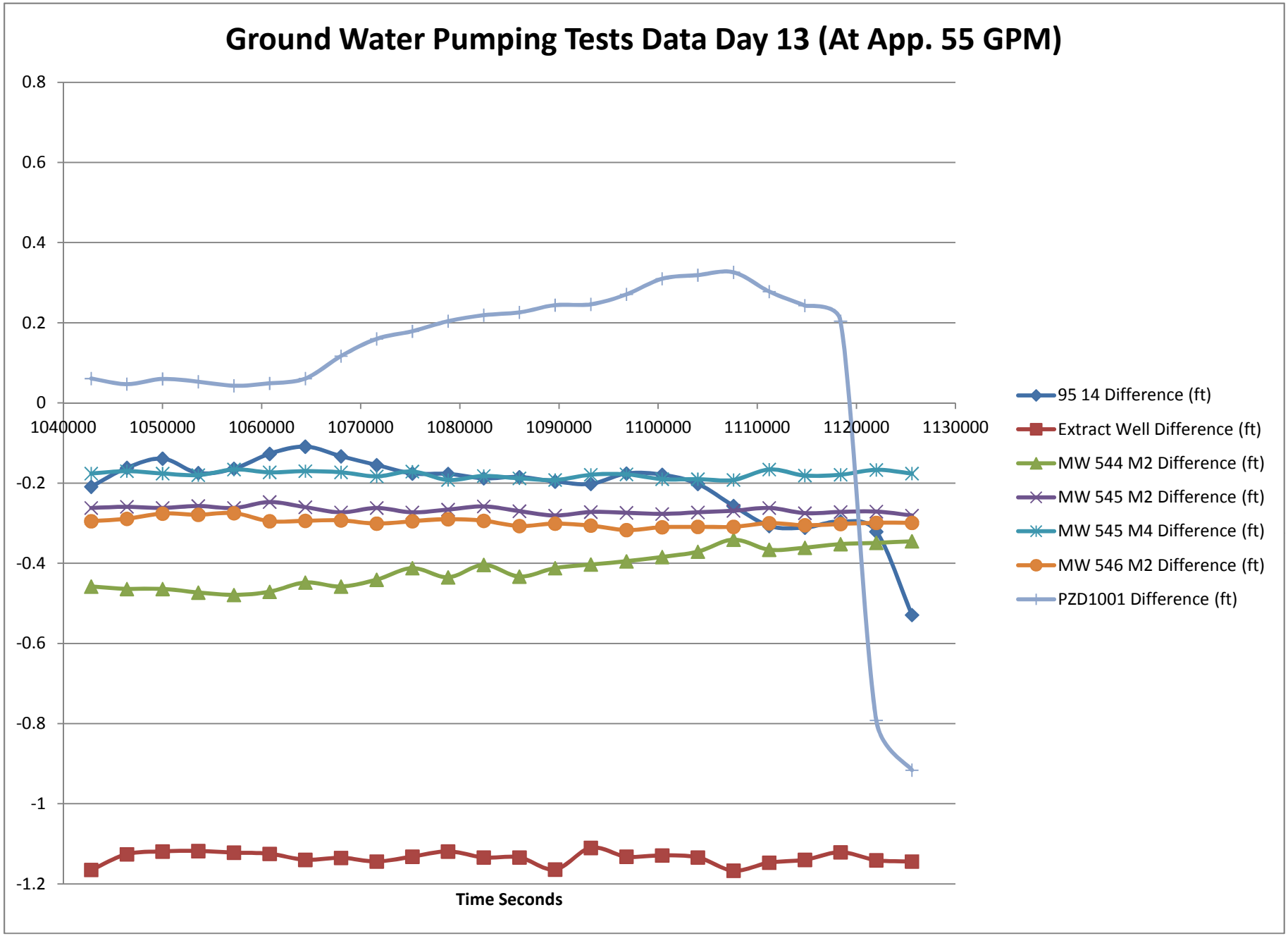

Ground Water Pumping Test Data Day 8 (At App. 52 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
600000
610000
620000
630000
640000
650000
660000
670000
680000
690000
700000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)

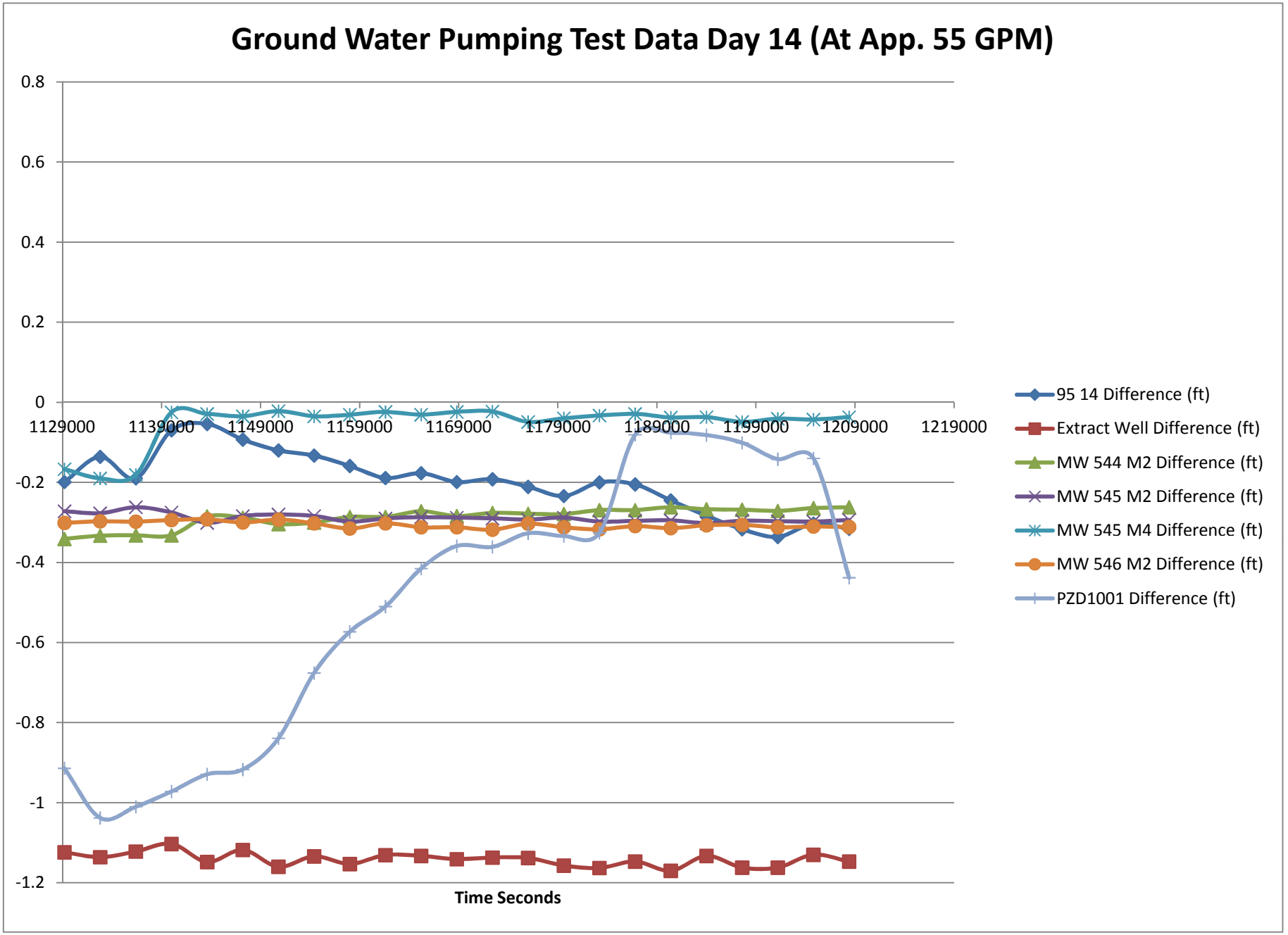

Ground Water Pumping Test Data Day 9 (At App. 52 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
690000
700000
710000
720000
730000
740000
750000
760000
770000
780000
790000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)


Ground Water Pumping Test Data Day 10 (At App. 55 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
770000
780000
790000
800000
810000
820000
830000
840000
850000
860000
870000
880000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)

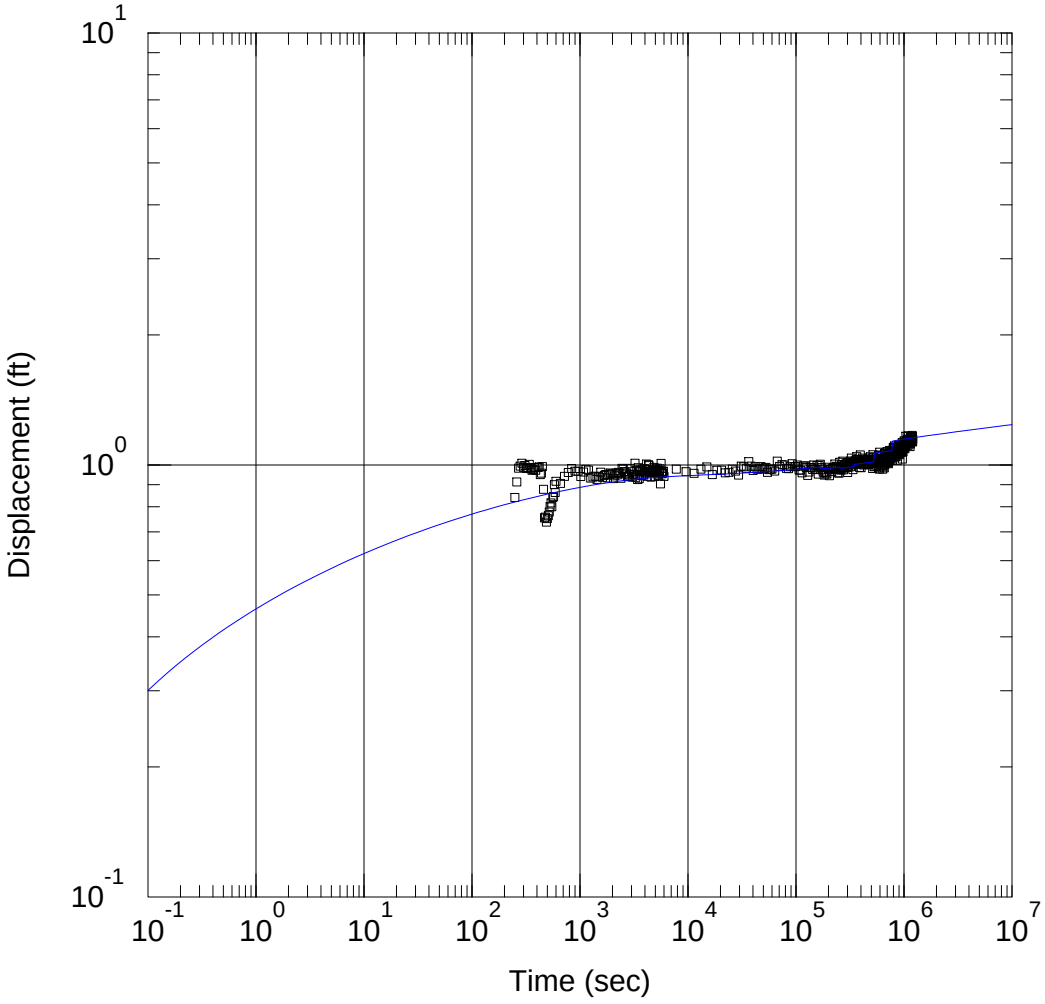

Groudn Water Pumping Test Data Day 11 (At App. 55 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
860000
870000
880000
890000
900000
910000
920000
930000
940000
950000
960000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)


Ground Water Pumping Test Data Day 12 (At App. 55 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
950000
960000
970000
980000
990000
1000000
1010000
1020000
1030000
1040000
1050000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)


Ground Water Pumping Tests Data Day 13 (At App. 55 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
1040000
1050000
1060000
1070000
1080000
1090000
1100000
1110000
1120000
1130000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)


Ground Water Pumping Test Data Day 14 (At App. 55 GPM)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-1.2
1129000
1139000
1149000
1159000
1169000
1179000
1189000
1199000
1209000
1219000
Time Seconds
95 14 Difference (ft)
Extract Well Difference (ft)
MW 544 M2 Difference (ft)
MW 545 M2 Difference (ft)
MW 545 M4 Difference (ft)
MW 546 M2 Difference (ft)
PZD1001 Difference (ft)

APPENDIX C
AQTESOLV DATA PLOTS



WELL TEST ANALYSIS

Data Set: K:\...\D1-EW-3_SS49gpm.aqt
Date: 01/04/12 Time: 09:01:00

PROJECT INFORMATION

Company: USACE
Client: MMR
Project: Demo 1
Location:
Test Well: D1-EW-3
Test Date: 6/22/2011

AQUIFER DATA

Saturated Thickness: 170. ft Anisotropy Ratio (Kz/Kr): 0.2

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

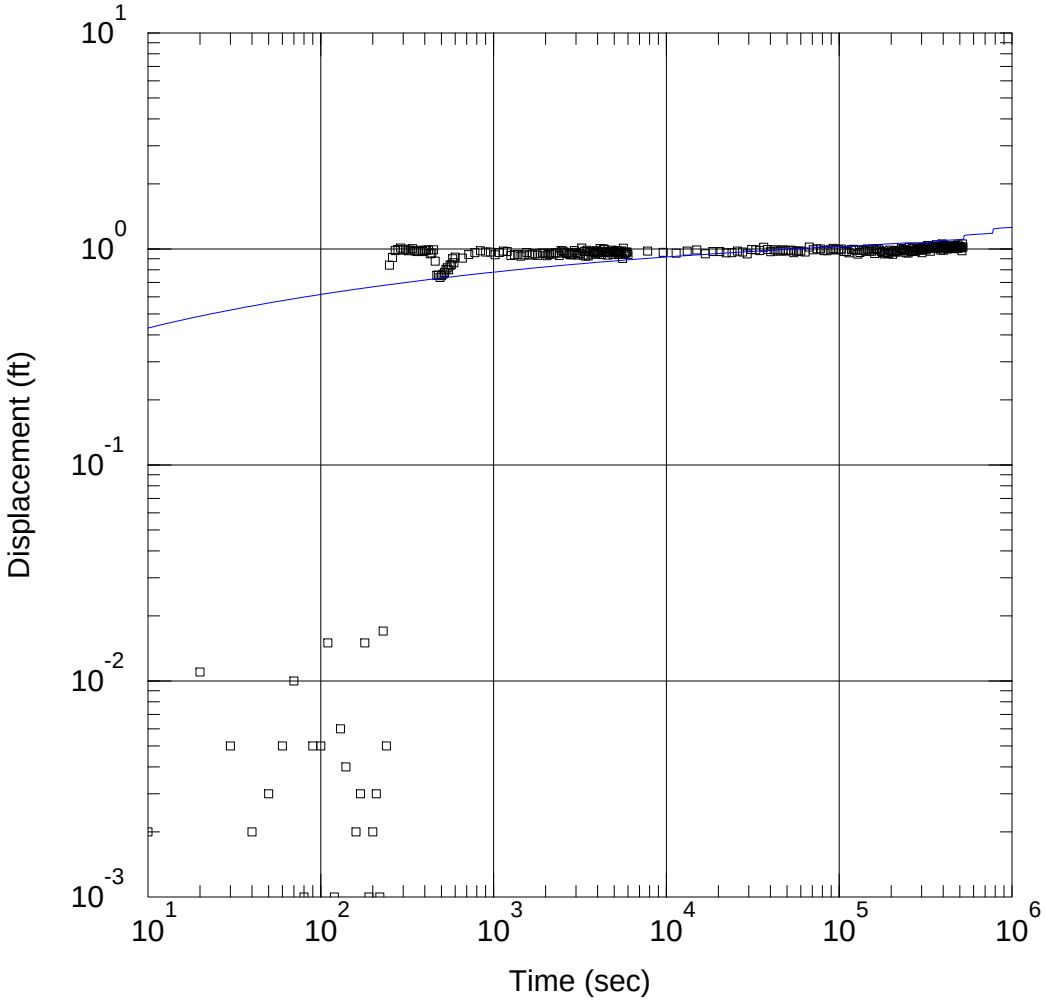
Observation Wells

Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

SOLUTION

Aquifer Model: Unconfined Solution Method: Tartakovsky-Neuman

T = 1.784E+4 ft^2/day S = 0.01145
Sy = 0.1968 Kz/Kr = 0.2
kD = 5.



WELL TEST ANALYSIS

Data Set: K:\...\D1-EW-3_step.aqt
Date: 01/04/12 Time: 13:45:05

PROJECT INFORMATION

Company: USACE
Client: MMR
Project: Demo 1
Location:
Test Well: D1-EW-3
Test Date: 6/22/2011

AQUIFER DATA

Saturated Thickness: 170. ft Anisotropy Ratio (Kz/Kr): 0.2692

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

Observation Wells

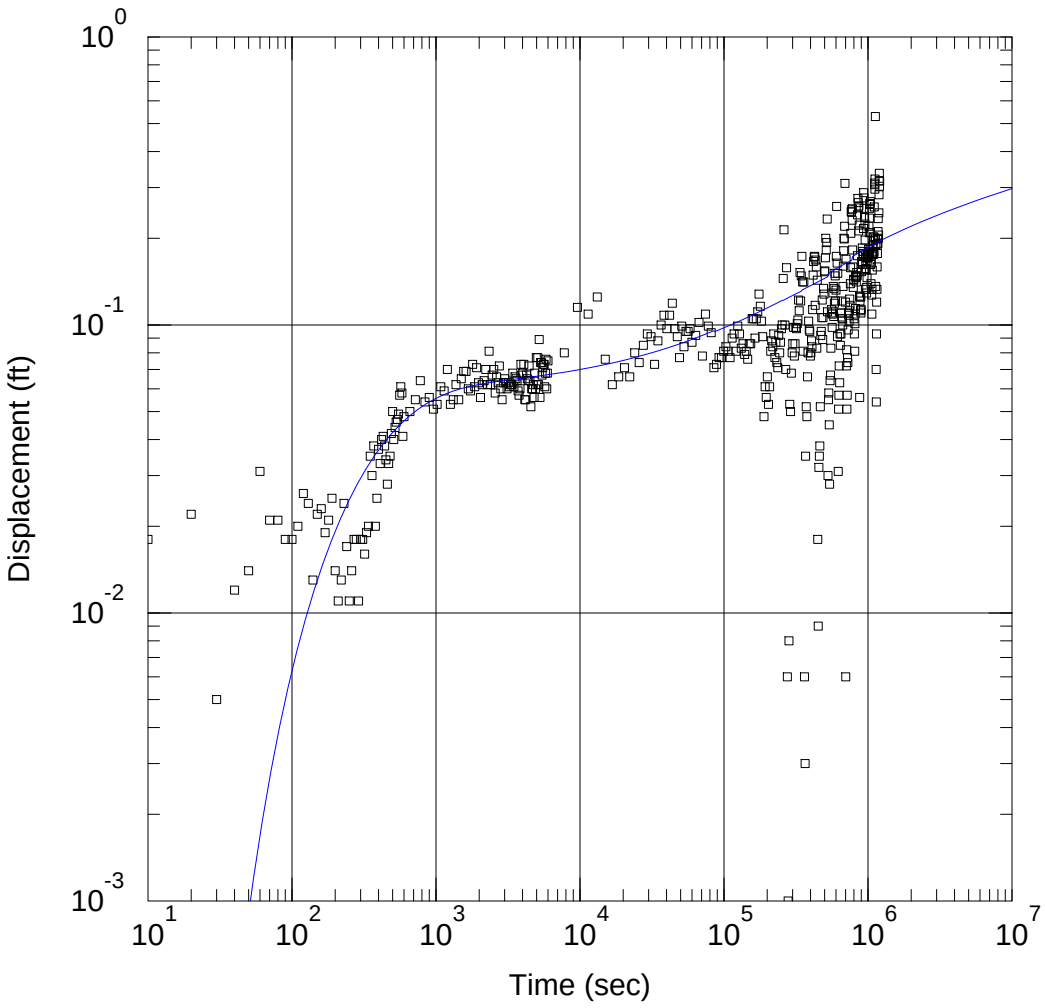
Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

SOLUTION

Aquifer Model: Confined Solution Method: Dougherty-Babu

T = 1.606E+4 ft^2/day
Kz/Kr = 0.2692
r(w) = 0.3296 ft
C_{wb} = 1. ft^2/ft^5

S = 0.1957
Sw = 0.075
r(c) = 0.25 ft
P_{wb} = 0



WELL TEST ANALYSIS

Data Set: K:\...\MW-544M2.aqt
Date: 01/04/12 Time: 11:41:26

PROJECT INFORMATION

Company: USACE
Client: MMR
Project: Demo 1
Location:
Test Well: D1-EW-3
Test Date: 6/22/2011

AQUIFER DATA

Saturated Thickness: 170. ft Anisotropy Ratio (Kz/Kr): 0.2

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

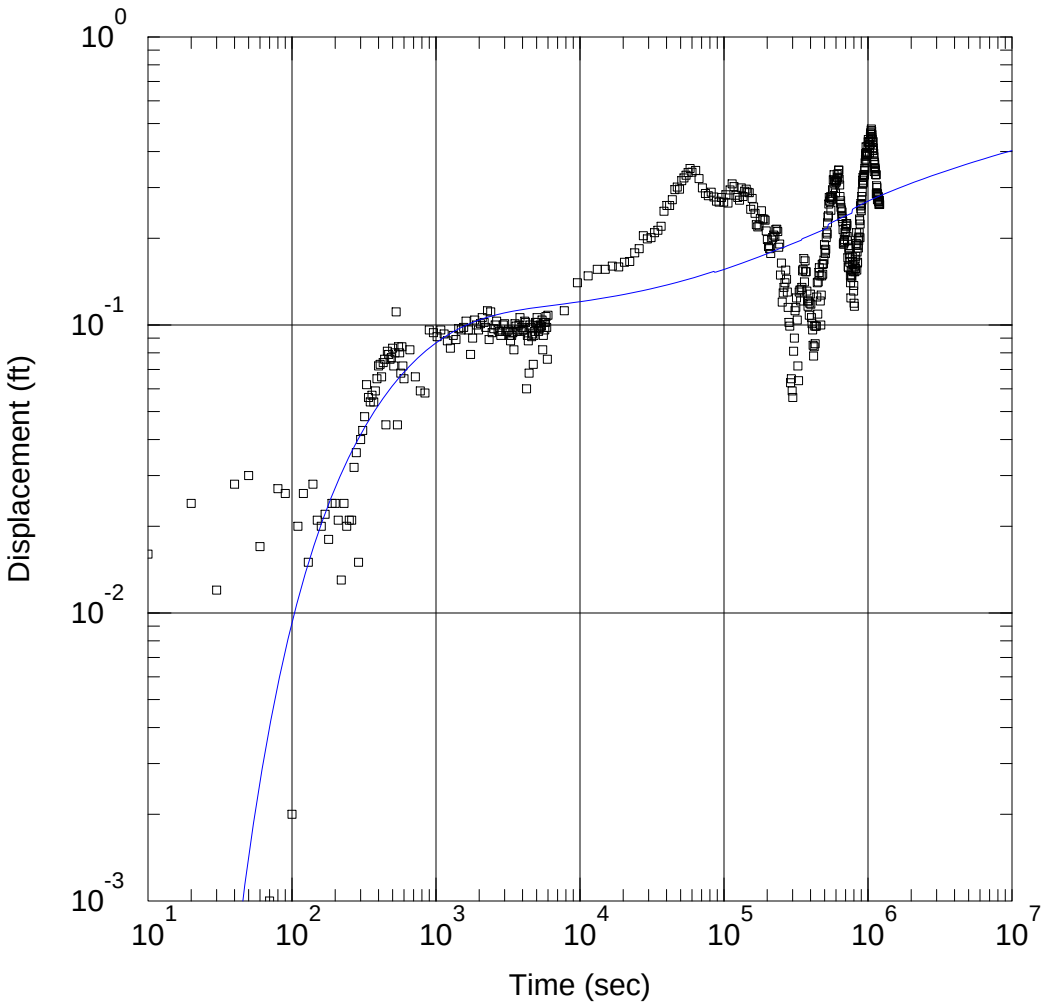
Observation Wells

Well Name	X (ft)	Y (ft)
95-14	849518.39	253149.77

SOLUTION

Aquifer Model: Unconfined Solution Method: Tartakovsky-Neuman

T = 1.429E+4 ft^2/day S = 0.00178
Sy = 0.1967 Kz/Kr = 0.2
kD = 4.456



WELL TEST ANALYSIS

Data Set: K:\...\MW-544M2.aqt
Date: 01/04/12 Time: 10:01:04

PROJECT INFORMATION

Company: USACE
Client: MMR
Project: Demo 1
Location:
Test Well: D1-EW-3
Test Date: 6/22/2011

AQUIFER DATA

Saturated Thickness: 170. ft Anisotropy Ratio (Kz/Kr): 0.207

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

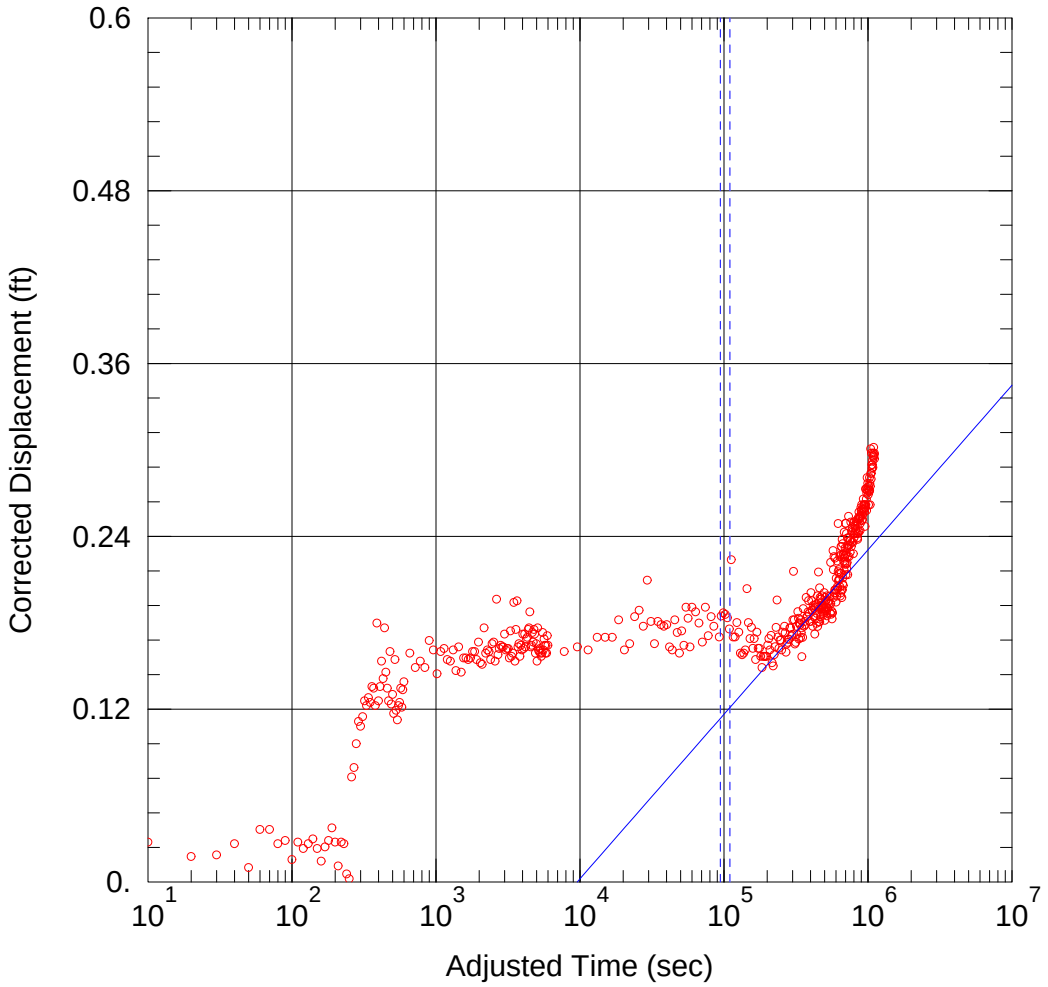
Observation Wells

Well Name	X (ft)	Y (ft)
MW-544M2	849263.22	253139.65

SOLUTION

Aquifer Model: Unconfined Solution Method: Tartakovsky-Neuman

T = 1.216E+4 ft^2/day S = 0.003148
Sy = 0.1805 Kz/Kr = 0.207
kD = 5.



WELL TEST ANALYSIS

Data Set: K:\...\MW-544M2.aqt
Date: 01/05/12 Time: 09:22:28

PROJECT INFORMATION

Company: USACE
Client: MMR
Project: Demo 1
Location:
Test Well: D1-EW-3
Test Date: 6/22/2011

AQUIFER DATA

Saturated Thickness: 170. ft Anisotropy Ratio (Kz/Kr): 0.2

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

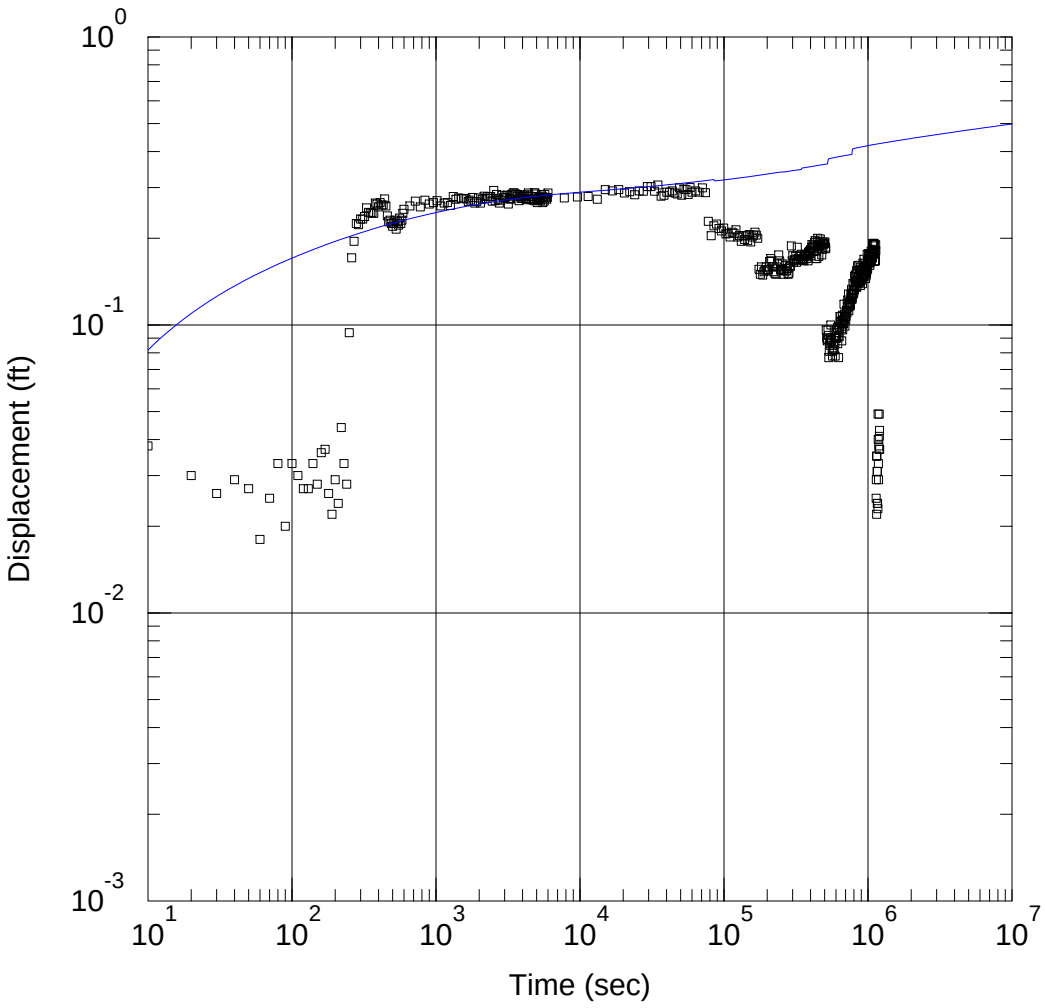
Observation Wells

Well Name	X (ft)	Y (ft)
○ MW-545M2	849322.4	253278.46

SOLUTION

Aquifer Model: Unconfined Solution Method: Cooper-Jacob

T = 1.682E+4 ft^2/day S = 42.95



WELL TEST ANALYSIS

Data Set: K:\...\MW-544M2.aqt
Date: 01/04/12 Time: 11:20:23

PROJECT INFORMATION

Company: USACE
Client: MMR
Project: Demo 1
Location:
Test Well: D1-EW-3
Test Date: 6/22/2011

AQUIFER DATA

Saturated Thickness: 170. ft Anisotropy Ratio (Kz/Kr): 0.2

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

Observation Wells

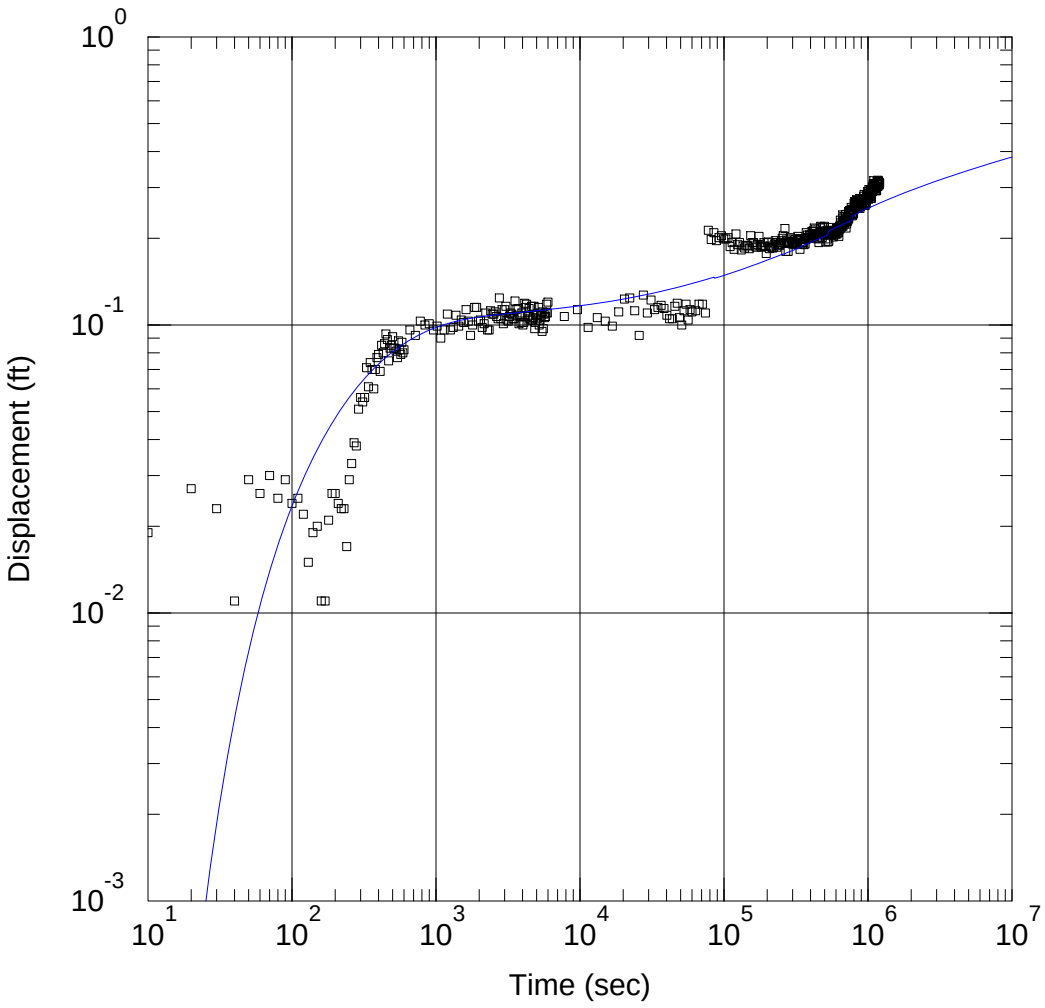
Well Name	X (ft)	Y (ft)
MW-545M4	849323.04	253279.14

SOLUTION

Aquifer Model: Unconfined Solution Method: Tartakovsky-Neuman

T = 2.048E+4 ft^2/day
Sy = 0.1967
kD = 4.456

S = 0.01515
Kz/Kr = 0.2



WELL TEST ANALYSIS

Data Set: K:\...\MW-544M2.aqt
Date: 01/04/12 Time: 11:57:59

PROJECT INFORMATION

Company: USACE
Client: MMR
Project: Demo 1
Location:
Test Well: D1-EW-3
Test Date: 6/22/2011

AQUIFER DATA

Saturated Thickness: 170. ft Anisotropy Ratio (Kz/Kr): 0.2

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

Observation Wells

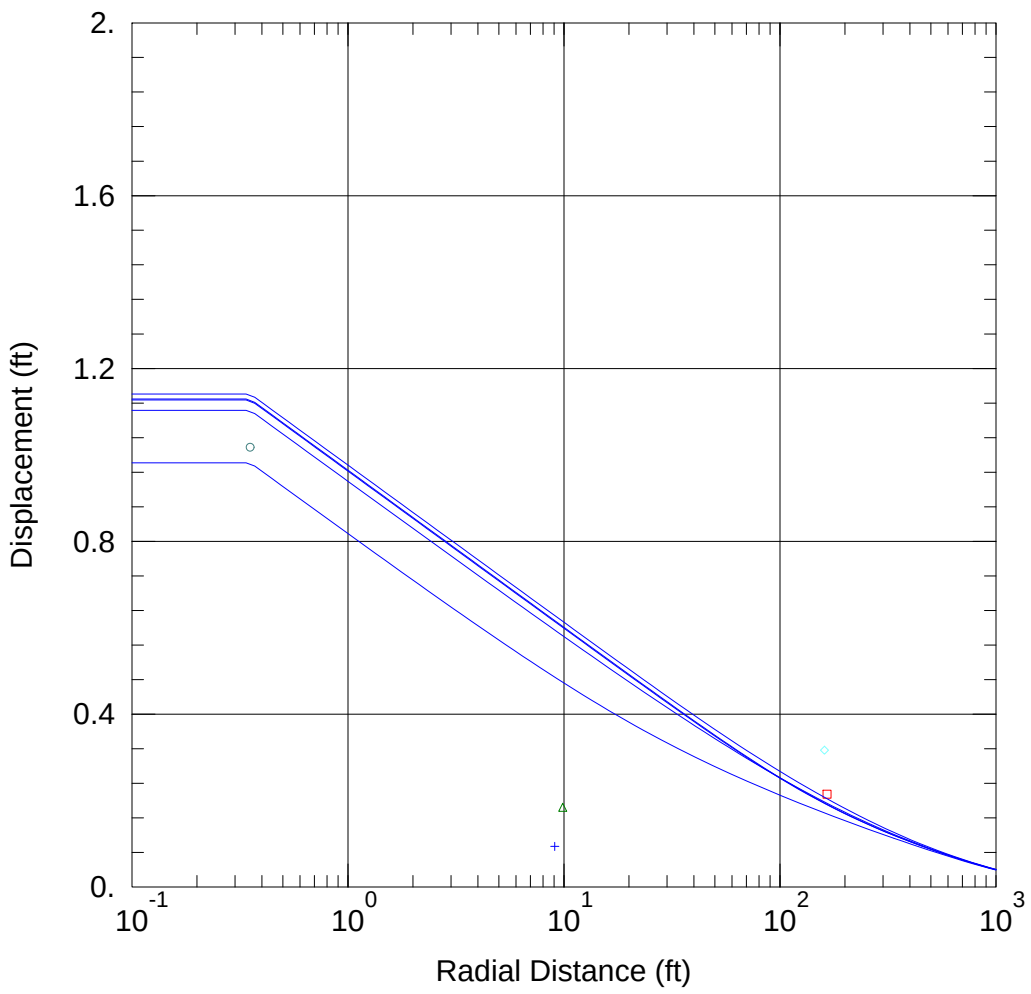
Well Name	X (ft)	Y (ft)
MW-546M2	849380.26	253443.76

SOLUTION

Aquifer Model: Unconfined Solution Method: Tartakovsky-Neuman

T = 1.236E+4 ft^2/day
Sy = 0.203
kD = 4.456

S = 0.001662
Kz/Kr = 0.2



WELL TEST ANALYSIS

Data Set: K:\...\dist_drawdown.aqt
Date: 01/26/12 Time: 12:18:02

PROJECT INFORMATION

Company: USACE
Client: MMR
Project: Demo 1
Location:
Test Well: D1-EW-3
Test Date: 6/22/2011

AQUIFER DATA

Saturated Thickness: 170. ft Anisotropy Ratio (Kz/Kr): 0.1062

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
D1-EW-3	849325.016	253287.987

Observation Wells

Well Name	X (ft)	Y (ft)
○ D1-EW-3	849325.016	253287.987
◇ MW-544M2	849263.22	253139.65
△ MW-545M2	849322.4	253278.46
+ MW-545M4	849323.04	253279.14
□ MW-546M2	849380.26	253443.76

SOLUTION

Aquifer Model: Unconfined Solution Method: Tartakovsky-Neuman

T = 1.7E+4 ft^2/day S = 0.005217
Sy = 0.1535 Kz/Kr = 0.1062
kD = 4.456

APPENDIX D
PERCHLORATE AND EXPLOSIVE COC GROUNDWATER SUMMARY RESULTS INCEPTION TO DATE

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
D1-EW-1	1	N	0.515	0.144 J	0.205 U	0.205 U	0.205 U	0.205 U	0.205 U	0.205 U	8/23/2011
D1-EW-1	1	N	0.938	0.444	0.235 U	0.235 U	0.235 U	0.235 U	0.235 U	0.235 U	4/19/2011
D1-EW-1	1	N	1.17	0.665	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	12/21/2010
D1-EW-1	1	N	1.52	0.792	0.187 J	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	9/7/2010
D1-EW-1	1	FD	1.47	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2010
D1-EW-1	1	N	1.47	0.695	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/19/2010
D1-EW-1	1	N	10.9	1.92 J	0.384 J	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	12/2/2009
D1-EW-1	1	N	1.68	0.801	0.112 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	11/2/2009
D1-EW-1	1	N	1.33	0.975	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	6/9/2009
D1-EW-1	1	N	3.7	2	0.28	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/16/2008
D1-EW-1	1	N	5.02	4.06	0.797	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	4/23/2008
D1-EW-501	1	FD	n/a	2.14	1.12	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	8/23/2011
D1-EW-501	1	N	0.324	1.96	1.14	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	8/23/2011
D1-EW-501	1	N	0.362	1.9 J	0.809 J	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	4/19/2011
D1-EW-501	1	N	0.622	4.12	1.52	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	1/6/2011
D1-EW-501	1	N	0.423	1.8 J	0.567 J	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	8/18/2010
D1-EW-501	1	N	0.5	2.02	0.835	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/19/2010
D1-EW-501	1	N	0.462	1.64	0.837	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	12/2/2009
D1-EW-501	1	N	1 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	10/1/2009
D1-EW-501	1	N	1 U	1.44	1.09	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	9/1/2009
D1-EW-501	1	N	1 U	2.48	0.999	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	6/9/2009
D1-EW-501	1	N	0.81 J	3.4	1.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/16/2008
D1-EW-501	1	N	1.28	5.89	1.26	0.217 U	0.217 U	0.217 U	0.217 UJ	0.217 U	4/23/2008
D1-EW-502	1	N	1.57	1.69	0.357	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	8/23/2011
D1-EW-502	1	N	1.59	1.21	0.417	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	4/19/2011
D1-EW-502	1	N	1.52	1.4	0.349	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	12/21/2010
D1-EW-502	1	FD	1.81	1.41 J	0.303 J	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	8/18/2010
D1-EW-502	1	N	1.8	1.47 J	0.461 J	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	8/18/2010
D1-EW-502	1	FD	2.97	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/5/2010
D1-EW-502	1	N	2.96	3.04	0.576	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	5/5/2010
D1-EW-502	1	N	2.69	2.39	0.42	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	12/2/2009
D1-EW-502	1	N	0.57	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	11/3/2009
D1-EW-502	1	N	2.2	2.22	0.426	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	9/30/2009
D1-EW-502	1	N	3.34	2.84	0.505	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	6/9/2009
D1-EW-502	1	N	6.7	3.8	0.56	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/16/2008
D1-EW-502	1	N	11.7	6.91	0.781	0.21 U	0.21 U	0.21 U	0.21 UJ	0.21 U	4/23/2008
MW-114M1	1	N	0.401	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/12/2011
MW-114M1	1	N	0.679	0.343	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	12/23/2010
MW-114M1	1	N	1.15	0.697	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	8/18/2010
MW-114M1	1	FD	1.12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2010
MW-114M1	1	N	1.15	0.792	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/13/2010
MW-114M1	1	FD	2.19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/16/2009
MW-114M1	1	N	2.16	1.3	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	11/16/2009

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-114M1	1	FD	4.95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2009
MW-114M1	1	N	4.85	4.54	0.384	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/21/2009
MW-114M1	1	N	9.23	10.6 J	0.514 J	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	4/8/2008
MW-114M1	1	N	2.91	2.02	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	4/19/2007
MW-114M1	1	N	n/a	1.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/2/2007
MW-114M1	1	N	0.814 J	0.27	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2006
MW-114M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/8/2006
MW-114M1	1	N	n/a	0.26 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2005
MW-114M1	1	N	1.7 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2005
MW-114M1	1	N	n/a	0.56	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2004
MW-114M1	1	N	4.36	0.67	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2004
MW-114M1	1	N	9.67	1.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2004
MW-114M1	1	N	13.4	1.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/9/2004
MW-114M1	1	N	7.7 J	1.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/2/2003
MW-114M1	1	N	9.6	1.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/27/2003
MW-114M1	1	N	11	1.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/13/2002
MW-114M1	1	N	14	2.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2002
MW-114M1	1	N	12	2.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2002
MW-114M1	1	N	22.1	3.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/21/2001
MW-114M1	1	N	10	1.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/18/2001
MW-114M1	1	N	13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/14/2001
MW-114M1	1	N	n/a	2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/14/2001
MW-114M1	1	N	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/28/2000
MW-114M1	1	N	n/a	0.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/24/2000
MW-114M2	1	N	0.7	0.218 U	0.218 U	0.218 U	0.218 U	0.218 U	0.218 U	0.218 U	4/12/2011
MW-114M2	1	N	0.654	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	12/23/2010
MW-114M2	1	N	1.27	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/13/2010
MW-114M2	1	N	1.62	0.228	0.248 J	0.204 U	0.177 J	0.204 U	0.204 U	0.204 U	11/16/2009
MW-114M2	1	FD	1.73	1.29	0.541	0.213 U	0.285	0.213 U	0.213 U	0.213 U	4/21/2009
MW-114M2	1	N	1.69	1.3	0.539	0.215 U	0.284	0.215 U	0.215 U	0.215 U	4/21/2009
MW-114M2	1	FD	2.56	2.98	0.776	0.21 U	0.296	0.21 U	0.21 U	0.21 U	12/23/2008
MW-114M2	1	N	2.56	3.44	0.909 J	0.208 U	0.336	0.208 U	0.208 U	0.208 U	12/23/2008
MW-114M2	1	N	13.3	33.7	6.9	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/8/2008
MW-114M2	1	N	n/a	102	17.3	0.215 U	0.968	0.215 U	0.215 U	0.215 U	1/31/2008
MW-114M2	1	FD	38.6	195 J	22.3 J	0.22 U	1.33	0.22 U	0.22 U	0.22 U	12/6/2007
MW-114M2	1	N	n/a	112 J	12 J	0.22 UJ	0.811 J	0.22 UJ	0.22 UJ	0.22 UJ	12/6/2007
MW-114M2	1	N	92.7	86.5	20.2	0.281 U	1.46	0.281 U	0.281 U	0.281 U	4/19/2007
MW-114M2	1	N	103	220 J	24 J	0.25 U	R	0.25 U	0.25 U	0.25 U	4/18/2006
MW-114M2	1	N	54	R	R	0.25 U	R	0.25 U	0.25 U	0.25 U	4/13/2005
MW-114M2	1	N	40.8	R	R	0.25 U	R	0.25 U	0.25 U	0.25 U	7/30/2004
MW-114M2	1	N	37.7	R	R	0.25 U	R	0.25 U	0.25 U	0.25 U	4/19/2004
MW-114M2	1	N	42.3	R	R	0.25 U	R	0.25 U	0.25 U	0.25 U	2/9/2004
MW-114M2	1	N	52 J	220	26	0.25 U	1.4	0.25 U	0.25 U	0.25 U	10/1/2003

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-114M2	1	N	56	200	31	0.25 U	1.5 J	0.25 U	0.25 U	0.25 U	5/27/2003
MW-114M2	1	N	71	220	28	0.25 U	1.4 J	0.25 U	0.25 U	0.25 U	11/13/2002
MW-114M2	1	N	64	210	24	0.25 U	1.3 J	0.25 U	0.42 J	0.25 U	8/9/2002
MW-114M2	1	N	72	190	19 J	0.25 U	1.1 J	0.25 U	0.25 U	0.25 U	5/29/2002
MW-114M2	1	N	127	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/10/2002
MW-114M2	1	N	n/a	170	15 J	0.25 UJ	0.69 J	0.25 UJ	0.25 UJ	0.25 UJ	1/7/2002
MW-114M2	1	N	207	140	9.3 J	0.25 U	0.5 J	0.25 U	0.25 U	0.25 U	6/19/2001
MW-114M2	1	N	n/a	120 J	10 J	0.25 U	0.53 J	0.25 U	0.25 U	0.25 U	3/14/2001
MW-114M2	1	N	260	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/14/2001
MW-114M2	1	N	300	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2000
MW-114M2	1	FD	n/a	140	14	0.25 U	0.5 J	0.25 U	0.25 U	0.25 U	10/24/2000
MW-114M2	1	N	n/a	140	14	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/24/2000
MW-129M1	1	N	0.102	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	5/3/2011
MW-129M1	1	N	0.0397 J	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	4/15/2010
MW-129M1	1	FD	0.942 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2009
MW-129M1	1	N	0.897 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/22/2009
MW-129M1	1	N	21.2	16.8	0.891	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/22/2008
MW-129M1	1	N	28 J	7.79 J	0.287 U	0.287 UJ	0.287 UJ	0.287 U	0.287 UJ	0.287 U	4/18/2007
MW-129M1	1	N	4.34	0.35	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2006
MW-129M1	1	N	1.5 J	1.7	0.26	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2005
MW-129M1	1	N	3.68	1.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2004
MW-129M1	1	N	6.54	2.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2004
MW-129M1	1	N	6.62	2.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2004
MW-129M1	1	N	8.5 J	1.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/2/2003
MW-129M1	1	N	n/a	1.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/24/2003
MW-129M1	1	N	5.9 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/21/2003
MW-129M1	1	N	2.2	0.26	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/13/2002
MW-129M1	1	N	1.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002
MW-129M1	1	N	n/a	0.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/10/2002
MW-129M1	1	N	n/a	0.72	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/27/2002
MW-129M1	1	N	4.63	1.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/12/2002
MW-129M1	1	N	5.92 J	1.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/21/2001
MW-129M1	1	N	6	0.48	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/19/2001
MW-129M1	1	N	9	0.62 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/14/2001
MW-129M1	1	N	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/2/2001
MW-129M1	1	N	n/a	0.66 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/3/2000
MW-129M2	1	N	0.071	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	5/3/2011
MW-129M2	1	N	0.061	0.227 U	0.227 U	0.227 U	0.227 U	0.227 U	0.227 U	0.227 U	12/27/2010
MW-129M2	1	N	0.476	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/15/2010
MW-129M2	1	FD	0.637	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/16/2009
MW-129M2	1	N	0.65	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	11/16/2009
MW-129M2	1	FD	1.93	0.548	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/22/2009
MW-129M2	1	N	1.99	0.583	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/22/2009

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-129M2	1	N	12.9	1.97 J	0.6 J	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	12/23/2008
MW-129M2	1	N	13.9	61.1	2.01 J	0.213 UJ	0.213 UJ	0.213 UJ	0.213 UJ	0.213 UJ	4/22/2008
MW-129M2	1	N	n/a	68.6	3.09	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	1/31/2008
MW-129M2	1	N	35.1	71.9	3	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	12/6/2007
MW-129M2	1	N	15.5	6.27	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	4/19/2007
MW-129M2	1	N	60.1	14	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2006
MW-129M2	1	N	4.5 J	4.4	0.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2005
MW-129M2	1	N	4.74	2.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2004
MW-129M2	1	N	5.27	2.1	0.38	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2004
MW-129M2	1	N	5.13	2.8	0.52	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2004
MW-129M2	1	N	6.7 J	3.8	0.56	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/2/2003
MW-129M2	1	N	14 J	13	1.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/24/2003
MW-129M2	1	FD	15	13	1.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/13/2002
MW-129M2	1	N	16	13 J	1.5 J	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	11/13/2002
MW-129M2	1	N	13	8.4	0.82	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002
MW-129M2	1	N	n/a	7.9	0.77	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/10/2002
MW-129M2	1	FD	n/a	7.9	0.77	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/27/2002
MW-129M2	1	N	n/a	7.6	0.75	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/27/2002
MW-129M2	1	N	0.72 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/12/2002
MW-129M2	1	N	6.93 J	10	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/21/2001
MW-129M2	1	N	8	1.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/20/2001
MW-129M2	1	N	6	1.2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/14/2001
MW-129M2	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/2/2001
MW-129M2	1	N	n/a	1.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/3/2000
MW-129M3	1	N	0.231	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	5/3/2011
MW-129M3	1	N	0.218	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	4/15/2010
MW-129M3	1	N	0.535 J	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	4/22/2009
MW-129M3	1	N	1.64	0.699	0.227 U	0.227 U	0.227 U	0.227 U	0.227 U	0.227 U	4/22/2008
MW-129M3	1	N	1 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	4/19/2007
MW-129M3	1	N	0.436 J	0.41	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2006
MW-129M3	1	N	0.54 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2005
MW-129M3	1	N	1.2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2004
MW-129M3	1	N	0.36 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2004
MW-129M3	1	N	0 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2004
MW-129M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2004
MW-129M3	1	N	0.59 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/2/2003
MW-129M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/24/2003
MW-129M3	1	N	0.7 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/13/2002
MW-129M3	1	FD	1.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002
MW-129M3	1	N	2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002
MW-129M3	1	N	0.69 J	0.32	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/15/2002
MW-129M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/21/2001
MW-129M3	1	FD	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/20/2001

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-129M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/20/2001
MW-129M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/14/2001
MW-129M3	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/2/2001
MW-129M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/3/2000
MW-139M1	1	N	0.015 J	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/28/2011
MW-139M1	1	N	0.079	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	4/14/2010
MW-139M1	1	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/30/2009
MW-139M1	1	N	1 U	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	4/8/2008
MW-139M1	1	N	2.55 J	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	4/18/2007
MW-139M1	1	N	1.38 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2006
MW-139M1	1	N	0.37 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/13/2006
MW-139M1	1	N	0.444 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/16/2005
MW-139M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/23/2005
MW-139M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2005
MW-139M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2004
MW-139M1	1	N	0.505 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/4/2004
MW-139M1	1	N	0.595 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/14/2004
MW-139M1	1	N	0.401 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/27/2004
MW-139M1	1	N	0.42 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/10/2003
MW-139M1	1	N	0.65 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/28/2003
MW-139M1	1	N	1.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/13/2002
MW-139M1	1	N	1.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2002
MW-139M1	1	N	1.86	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/17/2002
MW-139M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/27/2001
MW-139M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/20/2001
MW-139M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/15/2001
MW-139M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/29/2000
MW-139M2	1	FD	1.04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/28/2011
MW-139M2	1	N	1.07	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/28/2011
MW-139M2	1	N	n/a	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	12/27/2010
MW-139M2	1	N	7.23	0.232	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	4/14/2010
MW-139M2	1	N	n/a	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	11/16/2009
MW-139M2	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/30/2009
MW-139M2	1	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/30/2009
MW-139M2	1	N	n/a	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	12/22/2008
MW-139M2	1	N	10.9	4.02	0.444 U	0.444 U	0.444 U	0.444 U	0.444 U	0.444 U	4/8/2008
MW-139M2	1	N	n/a	4.63	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	12/6/2007
MW-139M2	1	N	1 UJ	3.53	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	4/18/2007
MW-139M2	1	N	n/a	3.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/2/2007
MW-139M2	1	N	3.86	1.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/13/2006
MW-139M2	1	N	n/a	0.92	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2006
MW-139M2	1	N	n/a	0.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/23/2005
MW-139M2	1	N	2.94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/7/2005

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-139M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/6/2004
MW-139M2	1	N	3.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/4/2004
MW-139M2	1	N	0.6 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/14/2004
MW-139M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/27/2004
MW-139M2	1	N	13	0.32	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/10/2003
MW-139M2	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/28/2003
MW-139M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/13/2002
MW-139M2	1	FD	1.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2002
MW-139M2	1	N	1.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2002
MW-139M2	1	N	2.77	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/17/2002
MW-139M2	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/27/2001
MW-139M2	1	N	3 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/20/2001
MW-139M2	1	N	11 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/15/2001
MW-139M2	1	N	8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/29/2000
MW-139M3	1	N	0.118	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/28/2011
MW-139M3	1	N	0.121	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/14/2010
MW-139M3	1	N	1 UJ	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	5/1/2009
MW-139M3	1	FD	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/8/2008
MW-139M3	1	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/8/2008
MW-139M3	1	FD	1 UJ	0.281 UJ	0.281 UJ	0.281 UJ	0.281 UJ	0.281 UJ	0.281 UJ	0.281 UJ	4/18/2007
MW-139M3	1	N	1 UJ	0.298 U	0.298 U	0.298 U	0.298 U	0.298 U	0.298 U	0.298 U	4/18/2007
MW-139M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/13/2006
MW-139M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2005
MW-139M3	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/4/2004
MW-139M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/14/2004
MW-139M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/27/2004
MW-139M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/10/2003
MW-139M3	1	FD	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/28/2003
MW-139M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/28/2003
MW-139M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/13/2002
MW-139M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2002
MW-139M3	1	N	1 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/17/2002
MW-139M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/27/2001
MW-139M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/20/2001
MW-139M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/15/2001
MW-139M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/29/2000
MW-162M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2007
MW-162M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2006
MW-162M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2005
MW-162M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/28/2004
MW-162M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/6/2004
MW-162M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/1/2004
MW-162M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10/10/2003

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-162M1	1	N	2 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/26/2003
MW-162M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/13/2002
MW-162M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-162M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2002
MW-162M1	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/18/2002
MW-162M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/15/2001
MW-162M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/4/2001
MW-162M2	1	N	0.046 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2011
MW-162M2	1	N	0.0446 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2010
MW-162M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2009
MW-162M2	1	N	1.18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/10/2008
MW-162M2	1	N	1.42	0.287 UJ	0.287 UJ	0.287 UJ	0.287 UJ	0.287 UJ	0.287 UJ	0.287 UJ	4/19/2007
MW-162M2	1	N	0.869 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/2/2007
MW-162M2	1	N	4.33	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2006
MW-162M2	1	N	4.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/12/2005
MW-162M2	1	N	5.1 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/21/2005
MW-162M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2005
MW-162M2	1	N	10 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2004
MW-162M2	1	N	6.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/28/2004
MW-162M2	1	N	4.11	0.25 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/16/2004
MW-162M2	1	N	3.91 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/1/2004
MW-162M2	1	N	4.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10/10/2003
MW-162M2	1	FD	3.4 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/27/2003
MW-162M2	1	N	3.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/27/2003
MW-162M2	1	N	1.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/14/2002
MW-162M2	1	FD	2 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-162M2	1	N	2.4 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-162M2	1	N	2.03	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2002
MW-162M2	1	N	1.55 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/18/2002
MW-162M2	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/15/2001
MW-162M2	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/5/2001
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2007
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2006
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2005
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/28/2004
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/6/2004
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/1/2004
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10/10/2003
MW-162M3	1	N	2 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/27/2003
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/15/2002
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-162M3	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2002
MW-162M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2002

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-162M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/22/2002
MW-162M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/2001
MW-162M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/5/2001
MW-165M1	1	N	0.015 J	0.227 U	0.227 U	0.227 U	0.227 U	0.227 U	0.227 U	0.227 U	4/19/2011
MW-165M1	1	N	0.407	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	4/15/2010
MW-165M1	1	N	1 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/16/2009
MW-165M1	1	N	1 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	4/18/2008
MW-165M1	1	N	1 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	4/16/2007
MW-165M1	1	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2006
MW-165M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2006
MW-165M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2006
MW-165M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2005
MW-165M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2005
MW-165M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2005
MW-165M1	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2004
MW-165M1	1	N	3.54 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/5/2004
MW-165M1	1	N	3.05	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/9/2004
MW-165M1	1	N	3.15 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/1/2004
MW-165M1	1	N	2.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/10/2003
MW-165M1	1	N	4 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/27/2003
MW-165M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/13/2002
MW-165M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2002
MW-165M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2002
MW-165M1	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2002
MW-165M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/2001
MW-165M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/7/2001
MW-165M2	1	N	0.233	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	4/19/2011
MW-165M2	1	N	0.277	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	12/23/2010
MW-165M2	1	N	0.357	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	4/15/2010
MW-165M2	1	N	1.09	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	11/16/2009
MW-165M2	1	FD	1 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/16/2009
MW-165M2	1	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/16/2009
MW-165M2	1	N	0.781 J	0.213 U	0.213 UJ	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	12/16/2008
MW-165M2	1	N	5.41	11.6	2.13	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/18/2008
MW-165M2	1	N	6.55	26.9	2.16	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	2/1/2008
MW-165M2	1	N	26.2	171	9.58	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	12/6/2007
MW-165M2	1	N	5.05	1.99	0.28	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	4/16/2007
MW-165M2	1	N	6.57	1.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/28/2006
MW-165M2	1	N	3.89	0.74	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2006
MW-165M2	1	FD	n/a	1.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2006
MW-165M2	1	N	n/a	1.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2006
MW-165M2	1	FD	6.14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/15/2005
MW-165M2	1	N	5.92	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/15/2005

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-165M2	1	N	0.62 J	0.56	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2005
MW-165M2	1	N	9.8	R	R	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2005
MW-165M2	1	N	94 J	R	R	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2004
MW-165M2	1	N	41.3	10	1.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2004
MW-165M2	1	N	39	10	1.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/9/2004
MW-165M2	1	FD	50.9 J	13	2.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/1/2004
MW-165M2	1	N	50.9 J	13	2.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/1/2004
MW-165M2	1	FD	58 J	12	1.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/11/2003
MW-165M2	1	N	57 J	12	1.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/11/2003
MW-165M2	1	N	110 J	R	R	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/27/2003
MW-165M2	1	N	78	19	2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/26/2002
MW-165M2	1	N	64	23	2.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2002
MW-165M2	1	N	83.5	26	2.2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2002
MW-165M2	1	N	81.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/10/2002
MW-165M2	1	N	n/a	27 J	2.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/7/2002
MW-165M2	1	N	102	50	3.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/2001
MW-165M2	1	N	122 J	60	4.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/8/2001
MW-165M3	1	N	0.027 J	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	4/19/2011
MW-165M3	1	N	0.0274 J	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	4/15/2010
MW-165M3	1	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/16/2009
MW-165M3	1	N	1 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/21/2008
MW-165M3	1	N	1 U	0.291 UJ	0.291 UJ	0.291 UJ	0.291 UJ	0.291 UJ	0.291 UJ	0.291 UJ	4/16/2007
MW-165M3	1	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2006
MW-165M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2006
MW-165M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2005
MW-165M3	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/5/2004
MW-165M3	1	N	0 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2004
MW-165M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/1/2004
MW-165M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/14/2003
MW-165M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/28/2003
MW-165M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/26/2002
MW-165M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2002
MW-165M3	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2002
MW-165M3	1	N	2 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	2/13/2002
MW-165M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/2001
MW-165M3	1	FD	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2001
MW-165M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2001
MW-172M1	1	N	0.025 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2011
MW-172M1	1	N	0.083	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2010
MW-172M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/7/2009
MW-172M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2008
MW-172M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2007
MW-172M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2006

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-172M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2005
MW-172M1	1	N	1 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/28/2004
MW-172M1	1	N	0 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2004
MW-172M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2004
MW-172M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/14/2003
MW-172M1	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/28/2003
MW-172M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/2003
MW-172M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/18/2002
MW-172M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/18/2002
MW-172M1	1	N	2 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	2/8/2002
MW-172M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/21/2001
MW-172M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2001
MW-172M2	1	N	0.121	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/27/2011
MW-172M2	1	N	0.127	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	4/14/2010
MW-172M2	1	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	5/7/2009
MW-172M2	1	N	0.378 J	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	4/18/2008
MW-172M2	1	N	0.25 J	0.278 UJ	0.278 UJ	0.278 UJ	0.278 UJ	0.278 UJ	0.278 UJ	0.278 UJ	4/13/2007
MW-172M2	1	N	0.616 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2006
MW-172M2	1	FD	0.551 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2006
MW-172M2	1	N	0.388 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2006
MW-172M2	1	N	0.688 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2005
MW-172M2	1	N	2.1 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2005
MW-172M2	1	N	4.1	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/28/2004
MW-172M2	1	N	4.39	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2004
MW-172M2	1	FD	4.44	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2004
MW-172M2	1	N	4.45	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2004
MW-172M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/15/2003
MW-172M2	1	N	6.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10/15/2003
MW-172M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/28/2003
MW-172M2	1	N	6.8 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/28/2003
MW-172M2	1	N	6.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/26/2002
MW-172M2	1	N	7.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/18/2002
MW-172M2	1	N	5.45	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/8/2002
MW-172M2	1	N	3.94 J	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	9/21/2001
MW-172M2	1	N	3 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2001
MW-172M3	1	N	0.097	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/27/2011
MW-172M3	1	N	0.0273 J	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	4/14/2010
MW-172M3	1	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	5/7/2009
MW-172M3	1	N	1 U	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	4/18/2008
MW-172M3	1	N	1 U	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	4/13/2007
MW-172M3	1	N	0.417 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2006
MW-172M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/14/2006
MW-172M3	1	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2005

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Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-172M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2005
MW-172M3	1	N	1 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/28/2004
MW-172M3	1	N	0 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2004
MW-172M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2004
MW-172M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/15/2003
MW-172M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/28/2003
MW-172M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/2003
MW-172M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/18/2002
MW-172M3	1	FD	2 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	2/8/2002
MW-172M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/8/2002
MW-172M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/24/2001
MW-172M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2001
MW-19D	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/27/2003
MW-19D	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/23/2002
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2001
MW-19D	1	N	n/a	R	R	R	R	R	R	R	5/2/2001
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2000
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/15/1999
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/11/1999
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/17/1998
MW-19D	1	N	n/a	0.4 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/4/1998
MW-19D	1	N	n/a	1.2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/13/1998
MW-19D	1	N	n/a	0.66 U	0.25 U	0.25 U	0.58 U	0.25 U	0.25 U	0.25 U	2/12/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.36 U	0.25 U	0.25 U	0.25 U	2/12/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/6/1998
MW-19D	1	N	n/a	0.45 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/6/1998
MW-19D	1	N	n/a	0.49 U	0.25 U	0.25 U	0.9 U	0.25 U	0.25 U	0.25 U	2/6/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/6/1998
MW-19D	1	N	n/a	0.7 U	0.25 U	0.25 U	0.44 U	0.25 U	0.25 U	0.25 U	2/4/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/4/1998
MW-19D	1	N	n/a	1.3 U	0.25 U	0.25 U	0.48 U	0.25 U	0.25 U	0.25 U	2/4/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/4/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/4/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/4/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1998
MW-19D	1	N	n/a	0.39 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1998
MW-19D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1998
MW-19D	1	N	n/a	0.44 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1998

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Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-19D	1	N	n/a	9 J	2.3 J	0.25 U	0.48 J	0.25 U	0.25 U	0.25 U	2/3/1998
MW-19D	1	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/2/1998
MW-19S	1	N	0.293	12.3	3.61	0.348	0.275	0.222 U	0.222 U	0.172 J	4/18/2011
MW-19S	1	N	n/a	6.26	6.2	0.272	0.242	0.21 U	0.21 U	0.449	12/22/2010
MW-19S	1	FD	n/a	11.2	2.82	0.227	0.28	0.21 U	0.21 U	0.21 U	4/22/2010
MW-19S	1	N	0.559	11.6	2.86	0.262	0.275	0.208 U	0.208 U	0.208 U	4/22/2010
MW-19S	1	N	n/a	12	5.03	0.377	0.34	0.204 U	0.204 U	0.204 U	11/16/2009
MW-19S	1	N	1 U	9.45	3.23	0.319	0.467	0.21 U	0.21 U	0.21 U	4/29/2009
MW-19S	1	N	n/a	6.41 J	2.32 J	0.316 J	0.429 J	0.213 UJ	0.213 UJ	0.213 UJ	12/29/2008
MW-19S	1	N	1 UJ	13	3.36	0.259	0.402	0.238 U	0.238 U	0.238 U	4/24/2008
MW-19S	1	N	n/a	16.4	11.8	0.222 J	0.227 U	0.227 U	0.227 U	0.373	12/7/2007
MW-19S	1	N	1 U	24.7	5.43	0.403	0.541	0.272 U	0.272 UJ	0.272 U	4/30/2007
MW-19S	1	N	0.83 J	34	40	1.1	1	0.25 U	0.25 U	0.49	1/3/2007
MW-19S	1	N	1 U	19	7.6	0.51 NJ	0.82	0.25 U	0.25 U	0.25 U	4/12/2006
MW-19S	1	N	n/a	9.8	3.9	0.42	0.75	0.25 U	0.25 U	0.25 U	2/8/2006
MW-19S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/13/2005
MW-19S	1	N	1 U	14	6.5	0.43	0.78	0.25 U	0.25 U	0.25 U	8/8/2005
MW-19S	1	N	1.86 J	R	R	R	R	0.25 U	0.25 U	R	6/1/2004
MW-19S	1	N	2.71 J	R	R	R	R	0.25 U	0.25 U	R	2/28/2004
MW-19S	1	N	7.8 J	80	31	1.1 J	1.3	0.25 U	0.25 U	1 J	9/27/2003
MW-19S	1	N	4.1 J	99	28 J	1.6	1.8 J	0.25 U	0.25 U	1.5 J	8/7/2002
MW-19S	1	N	5.2	120	32 J	1.5	1.4 J	0.25 U	0.25 U	1.8 J	5/29/2002
MW-19S	1	N	18.6 J	120	46 J	2.2	2.3	0.25 U	0.25 U	2.2 J	12/27/2001
MW-19S	1	N	8.49	120	43	1.5 J	1.7 J	0.25 U	5.8 U	2.4	8/24/2001
MW-19S	1	N	41	200	51	1.2	1.4 J	0.25 U	0.25 U	1.3 J	6/18/2001
MW-19S	1	N	12	45 J	40 J	1 J	1.4 J	0.25 U	0.25 U	1.6 J	12/8/2000
MW-19S	1	N	5 J	290	67	1.7	2.4 J	0.26 J	0.25 U	2 J	8/8/2000
MW-19S	1	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/6/2000
MW-19S	1	N	n/a	160	50 J	1.5	1.6 J	0.25 U	0.25 U	3.9 J	5/23/2000
MW-19S	1	N	n/a	150 J	49 J	1.4 J	1.6 J	0.25 U	0.25 U	3.7 J	5/12/2000
MW-19S	1	N	n/a	240	76	3.1	4.6 J	0.25 U	0.25 U	2.6 J	9/10/1999
MW-19S	1	N	n/a	250	71	2.9 J	4 J	5 U	0.25 UJ	7.2 J	2/12/1999
MW-19S	1	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/20/1998
MW-19S	1	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/5/1998
MW-214M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/12/2007
MW-214M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2006
MW-214M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2005
MW-214M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2004
MW-214M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/21/2004
MW-214M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/19/2004
MW-214M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/5/2004
MW-214M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/5/2003
MW-214M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/4/2002

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-214M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2002
MW-214M2	1	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/12/2011
MW-214M2	1	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2010
MW-214M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2009
MW-214M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2008
MW-214M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2007
MW-214M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/28/2006
MW-214M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/12/2006
MW-214M2	1	N	0.391 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/16/2005
MW-214M2	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/21/2005
MW-214M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2004
MW-214M2	1	N	0.61 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/2/2004
MW-214M2	1	N	0.35 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/21/2004
MW-214M2	1	N	0.65 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/19/2004
MW-214M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/5/2004
MW-214M2	1	N	0.72 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/5/2003
MW-214M2	1	N	0.6 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/4/2002
MW-214M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2002
MW-214M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2007
MW-214M3	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/12/2006
MW-214M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/12/2006
MW-214M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2005
MW-214M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2004
MW-214M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/21/2004
MW-214M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/19/2004
MW-214M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/5/2004
MW-214M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/6/2003
MW-214M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2003
MW-214M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/4/2002
MW-214M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2002
MW-255M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/29/2007
MW-255M1	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2006
MW-255M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2006
MW-255M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2005
MW-255M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/5/2004
MW-255M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/1/2004
MW-255M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/3/2003
MW-255M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/31/2003
MW-255M1	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/31/2003
MW-255M2	1	N	0.086	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/26/2011
MW-255M2	1	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2010
MW-255M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2009
MW-255M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2008

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-255M2	1	N	0.622 J	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	8/28/2007
MW-255M2	1	N	2.75 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/29/2007
MW-255M2	1	N	1.59 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2006
MW-255M2	1	N	0.441 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2006
MW-255M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/16/2005
MW-255M2	1	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/21/2005
MW-255M2	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/21/2005
MW-255M2	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-255M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-255M2	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/5/2004
MW-255M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/1/2004
MW-255M2	1	N	0.36 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/3/2003
MW-255M2	1	N	1.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/31/2003
MW-255M2	1	N	0.54 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/31/2003
MW-255M3	1	FD	0.772 J	0.225 UJ	0.225 UJ	0.225 UJ	0.225 UJ	0.225 UJ	0.225 UJ	0.225 UJ	8/28/2007
MW-255M3	1	N	0.795 J	0.225 UJ	0.225 UJ	0.225 UJ	0.225 UJ	0.225 UJ	0.225 UJ	0.225 UJ	8/28/2007
MW-255M3	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/29/2007
MW-255M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2006
MW-255M3	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2005
MW-255M3	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/5/2004
MW-255M3	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/1/2004
MW-255M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/1/2004
MW-255M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/11/2003
MW-255M3	1	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/31/2003
MW-255M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/31/2003
MW-255M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/31/2003
MW-271	1	N	1 U	0.85 U	0.25 U	0.77 U	0.25 U		3.9 J	0.58 J	5/28/2003
MW-271	1	N	1 U	1.8 U	0.25 U	0.25 U	0.25 U		4.6 J	1.6 J	5/23/2003
MW-271	1	N	1 U	4 U	0.25 U	4 U	4 U		7.6 J	2 J	5/23/2003
MW-271	1	N	1 U	0.65 U	0.25 U	0.44 U	0.25 U	3 J	7 J	0.34 J	5/23/2003
MW-271	1	N	1 U	3.8 U	0.25 U	0.25 U	0.25 U		5.6 J	2 J	5/22/2003
MW-271	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ	0.38 UJ	0.25 U	5/22/2003
MW-271	1	N	0.459 J	3.1 U	0.25 U	1.4 U	0.25 U		3.9 J	1.5 J	5/22/2003
MW-271	1	N	0.756 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ	1.2 UJ	0.6 J	5/22/2003
MW-271	1	N	0.459 J	7.3 U	0.25 U	2.4 U	0.25 U		9.4 J	4 J	5/22/2003
MW-271	1	N	0.788 J	3.1 U	0.25 U	1.8 U	0.25 U		11 J	2.9 J	5/22/2003
MW-271	1	N	1 U	20 U	0.25 U	20 U	20 U		26 J	23 J	5/21/2003
MW-272	1	N	1 U	0.25 U	0.25 U	0.52 U	0.8 U		1.5 J	0.25 U	6/11/2003
MW-272	1	N	1 U	0.25 U	0.25 U	0.9 U	1 U		1.6 J	0.27 J	6/11/2003
MW-272	1	N	1 U	0.25 U	0.25 U	0.25 U	1.1 U	0.76 *	1.8 J	0.34 U	6/11/2003
MW-272	1	N	1 U	0.25 U	0.25 U	0.25 U	0.85 U	0.58 *	1.3 J	0.35 U	6/11/2003
MW-272	1	N	1 U	0.25 U	0.25 U	0.25 U	0.78 U		1.3 J	0.25 U	6/11/2003
MW-272	1	N	1 U	0.41 J	0.25 U	0.25 U	0.25 U		1.7 J	0.25 U	6/11/2003

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-272	1	N	0.71 J	0.25 U	0.25 U	0.25 U	0.25 U	0.28 U	0.63 U	0.25 U	6/10/2003
MW-272	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U		2 J	0.25 U	6/10/2003
MW-272	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U		2.6 J	1.7 U	6/9/2003
MW-272	1	N	1 U	5.3 U	0.25 U	0.93 U	0.25 U		4.5 J	0.76 U	6/9/2003
MW-272	1	N	1 U	10 U	0.25 U	4 U	4 U		7.4 J	1.1 J	6/9/2003
MW-272	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U		0.99 J	0.25 U	6/2/2003
MW-274	1	N	n/a	4.3	0.63	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/5/2007
MW-31D	1	N	1 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 UJ	0.278 U	4/27/2007
MW-31D	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/13/2006
MW-31D	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/30/2005
MW-31D	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/27/2004
MW-31D	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/11/2004
MW-31D	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/28/2004
MW-31D	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/27/2003
MW-31D	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/27/2003
MW-31D	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/15/2002
MW-31D	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/7/2002
MW-31D	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/22/2002
MW-31D	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/4/2002
MW-31D	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/2/2001
MW-31D	1	N	5 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/2/2001
MW-31D	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/18/2000
MW-31D	1	N	n/a	150	29	2.8	2.7 J	0.52 J	0.25 U	3.9 J	8/9/2000
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/15/2000
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/15/1999
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/1/1999
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/14/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/23/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/23/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/23/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/23/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/19/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/19/1998

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-31D	1	N	n/a	0.29 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/19/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/19/1998
MW-31D	1	N	n/a	0.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/19/1998
MW-31D	1	N	n/a	1.1 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/18/1998
MW-31D	1	N	n/a	7.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/18/1998
MW-31D	1	N	n/a	270	8.2 J	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	6/18/1998
MW-31D	1	N	n/a	100	16 J	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	6/18/1998
MW-31D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.31 J	0.25 U	6/18/1998
MW-31M	1	N	0.456	6.88	4.13	0.304	0.25	0.217 U	0.217 U	0.217 U	4/18/2011
MW-31M	1	N	0.425	4.58	3.7	0.321	0.252	0.208 U	0.208 U	0.208 U	12/21/2010
MW-31M	1	N	0.113	1.45	0.588	0.204 U	0.132 J	0.204 U	0.204 U	0.204 U	4/8/2010
MW-31M	1	N	0.055	0.221	2.35	0.254	0.208 J	0.21 U	0.21 U	0.21 U	11/18/2009
MW-31M	1	FD	n/a	20.1	3.15	0.221	0.354	0.213 U	0.213 U	0.213 U	4/20/2009
MW-31M	1	N	1 U	20.5	4.05	0.221	0.301	0.213 U	0.213 U	0.213 U	4/20/2009
MW-31M	1	N	1 U	0.219	1.84 J	0.211	0.472	0.21 U	0.21 U	0.21 U	12/16/2008
MW-31M	1	N	0.737 J	21.2	42.6	0.222 U	0.4	0.222 U	0.222 U	0.222 U	4/24/2008
MW-31M	1	N	0.501 J	11.6 J	7.84 J	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	12/7/2007
MW-31M	1	N	0.928 J	25.9	31.1	0.266 U	0.382	0.266 U	0.266 U	0.266 U	4/26/2007
MW-31M	1	N	2.68	26	9.1	0.25 U	0.83	0.25 U	0.25 U	0.25 U	4/13/2006
MW-31M	1	N	16	R	R	0.25 U	R	0.25 U	0.25 U	0.25 U	4/30/2005
MW-31M	1	N	7.44 J	R	R	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/27/2004
MW-31M	1	N	0.474 J	2	0.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/11/2004
MW-31M	1	N	0.628 J	1.2	0.68 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/28/2004
MW-31M	1	N	2.9	1.4	0.28	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/27/2003
MW-31M	1	N	1.8 J	8.1	1.1 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/27/2003
MW-31M	1	N	5.2	4.6	1.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/15/2002
MW-31M	1	N	10 J	7.8	1.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/7/2002
MW-31M	1	FD	3.04 J	7.2	0.32	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/22/2002
MW-31M	1	N	2.98 J	7.4	0.31	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/22/2002
MW-31M	1	N	1.66 J	1.2	0.25 U	0.27	0.25 U	0.25 U	0.25 U	0.25 U	1/4/2002
MW-31M	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/2/2001
MW-31M	1	N	n/a	0.25 U	0.25 U	0.3	0.25 U	0.25 U	0.25 U	0.25 U	8/2/2001
MW-31M	1	N	19	70	26	3.3	3.8	0.39 J	0.25 U	5.2	5/23/2001
MW-31M	1	N	5 U	1.6 J	1.2 J	0.36 J	0.3 J	0.25 U	0.25 U	0.25 U	12/8/2000
MW-31M	1	N	50 J	14	1.8 J	0.38	0.41 J	0.25 U	0.25 U	0.25 U	8/9/2000
MW-31M	1	N	n/a	19	0.89 J	0.38 J	0.55	0.25 U	0.25 U	0.25 U	5/15/2000
MW-31M	1	N	n/a	29	13	0.5 U	1.7 J	0.5 U	0.5 U	0.5 U	9/15/1999
MW-31M	1	N	n/a	370	27	0.25 UJ	1.3 J	0.25 UJ	0.25 UJ	0.25 UJ	2/2/1999
MW-31M	1	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/15/1998
MW-31S	1	FD	n/a	2.47	1.89	0.795	0.323	0.204 J	0.217 U	2.06	4/18/2011
MW-31S	1	N	0.303	3.06	2.04	0.788	0.296	0.227 J	0.235 U	1.86	4/18/2011
MW-31S	1	N	0.651	4.39	2.2	0.942	0.378	0.292	0.208 U	2.23	12/21/2010
MW-31S	1	N	0.443	7.09	3.58	1.03	0.538	0.229	0.206 U	2.1	4/8/2010

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-31S	1	N	0.229	5.46	3.19	1.18	0.632	0.209	0.206 U	2.66	11/18/2009
MW-31S	1	N	1 U	4.97	9.23	1.03	0.919	0.193 J	0.217 U	2.53	4/20/2009
MW-31S	1	N	1 U	10.6 J	5.24 J	0.894	1.02	0.22	0.208 U	2.66	12/16/2008
MW-31S	1	N	0.47 J	12.7	9.94	0.795	0.77	0.235 U	0.235 U	2.5	4/24/2008
MW-31S	1	N	0.741 J	28.2	7.22	1.06	0.913	0.217 U	0.217 U	2.83	12/7/2007
MW-31S	1	N	1 U	6.3	5.88	0.9	0.831	0.154 J	0.269 U	2.84	4/26/2007
MW-31S	1	N	1.62	27 J	13	1.2 NJ	0.95	R	0.25 U	4.8	4/13/2006
MW-31S	1	N	4.6	R	R	R	R	R	0.25 U	R	4/30/2005
MW-31S	1	N	4.7 J	13 J	12 J	1.7	1.2 J	0.35 J	0.25 U	6.3	10/27/2004
MW-31S	1	N	5.02	R	R	R	R	R	0.25 U	R	5/11/2004
MW-31S	1	N	7.77 J	R	R	R	R	R	0.25 U	R	2/28/2004
MW-31S	1	FD	5.3	62	28	2.5	2.2	0.44 J	0.25 U	5.2 J	9/27/2003
MW-31S	1	N	4.6	63	29	2.5 J	2.3	0.46 J	0.25 U	5.2 J	9/27/2003
MW-31S	1	N	10	R	R	R	R	0.44 U	0.25 U	R	3/28/2003
MW-31S	1	N	4.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/15/2002
MW-31S	1	N	n/a	11	16	2.8	3	0.36 J	0.25 U	5.5	11/15/2002
MW-31S	1	N	7.2 J	85	31 J	3	3.1 J	0.41 J	0.25 U	5.9	8/7/2002
MW-31S	1	N	12	130	24 J	3.4 J	2.4 J	0.38	0.25 U	5.5	5/29/2002
MW-31S	1	N	12.5	31	11 J	3.6	3.2	0.46 J	0.25 U	5.9	1/4/2002
MW-31S	1	N	16.2	88	20	3.6 J	3 J	0.4 J	0.25 U	5.4	8/24/2001
MW-31S	1	N	20 J	81	29	3.2	3.8	0.36 J	0.25 U	5.2	5/2/2001
MW-31S	1	N	30	120	43 J	3.2 J	3.3 J	0.46 J	0.25 U	5.2 J	12/8/2000
MW-31S	1	N	40 J	140	28	2.7	2.6 J	0.46 J	0.25 U	3.9 J	8/9/2000
MW-31S	1	N	n/a	110	28 J	2.4	3	0.52 J	0.25 U	3.3	5/15/2000
MW-31S	1	N	n/a	50	35	1.5	4.3 J	0.75 U	0.75 U	1.2	9/15/1999
MW-31S	1	N	n/a	210	24	1.8 J	1.5 J	0.39 J	0.25 U	0.25 U	2/1/1999
MW-31S	1	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/15/1998
MW-32D	1	N	0.271	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2011
MW-32D	1	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2010
MW-32D	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/29/2009
MW-32D	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2008
MW-32D	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2008
MW-32D	1	N	1.18 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/29/2007
MW-32D	1	N	0.393 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2006
MW-32D	1	N	0.83 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/23/2005
MW-32D	1	N	0.71 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/15/2004
MW-32D	1	N	4.78	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2004
MW-32D	1	N	2.35	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2004
MW-32D	1	N	2.2 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/10/2004
MW-32D	1	N	2.2 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2003
MW-32D	1	N	0.44 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/31/2003
MW-32D	1	N	0.66 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/29/2003
MW-32D	1	N	0.64 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2002

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-32D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/16/1999
MW-32D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/2/1999
MW-32D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/16/1998
MW-32M	1	N	0.177	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/28/2011
MW-32M	1	N	0.0232 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2010
MW-32M	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/30/2009
MW-32M	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/23/2008
MW-32M	1	N	0.339 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/29/2007
MW-32M	1	N	0.304 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2006
MW-32M	1	N	0.544 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2006
MW-32M	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/20/2005
MW-32M	1	FD	4.03	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2004
MW-32M	1	N	4.21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2004
MW-32M	1	N	4.14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2004
MW-32M	1	N	3.93	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/4/2004
MW-32M	1	FD	2.8 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2003
MW-32M	1	N	2.6 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2003
MW-32M	1	N	2.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/31/2003
MW-32M	1	FD	2.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/29/2003
MW-32M	1	N	2.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/29/2003
MW-32M	1	N	1.97	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2002
MW-32M	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/16/1999
MW-32M	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1999
MW-32M	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/16/1998
MW-32S	1	N	0.04 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2011
MW-32S	1	N	0.0112 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2010
MW-32S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/30/2009
MW-32S	1	N	0.952 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2008
MW-32S	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/29/2007
MW-32S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/1/2006
MW-32S	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/23/2005
MW-32S	1	N	1 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/16/2004
MW-32S	1	N	1.26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2004
MW-32S	1	N	1.04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2004
MW-32S	1	N	1.69	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/4/2004
MW-32S	1	N	2 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2003
MW-32S	1	N	1.5 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/31/2003
MW-32S	1	N	2.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/29/2003
MW-32S	1	N	1.38	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/23/2002
MW-32S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/16/1999
MW-32S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1999
MW-32S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/22/1998
MW-33D	1	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2011

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-33D	1	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2010
MW-33D	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/1/2009
MW-33D	1	N	0.458 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2008
MW-33D	1	N	0.438 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2007
MW-33D	1	N	2.02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2006
MW-33D	1	FD	0.7 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/21/2005
MW-33D	1	N	0.7 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/21/2005
MW-33D	1	N	1.1 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2004
MW-33D	1	N	0.83 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2004
MW-33D	1	N	0.476 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2004
MW-33D	1	N	0.839 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/4/2004
MW-33D	1	N	1.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2003
MW-33D	1	N	1.6 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/31/2003
MW-33D	1	N	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/6/2003
MW-33D	1	FD	2.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/15/2002
MW-33D	1	N	2.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/15/2002
MW-33D	1	N	2 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-33D	1	N	2.02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/23/2002
MW-33D	1	N	1.54 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/26/2001
MW-33D	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2001
MW-33D	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/7/2001
MW-33D	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-33D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/16/1999
MW-33D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1999
MW-33D	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/21/1998
MW-33M	1	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2011
MW-33M	1	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2010
MW-33M	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/1/2009
MW-33M	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2008
MW-33M	1	N	0.269 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2007
MW-33M	1	N	0.673 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2006
MW-33M	1	N	0.64 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2005
MW-33M	1	N	0.767 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2004
MW-33M	1	FD	0.41 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2004
MW-33M	1	N	0.48 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2004
MW-33M	1	N	1.06	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/5/2004
MW-33M	1	N	1.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2003
MW-33M	1	N	1.5 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/31/2003
MW-33M	1	N	1.7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/6/2003
MW-33M	1	N	1.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2002
MW-33M	1	N	2.1 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-33M	1	N	1.72	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/23/2002
MW-33M	1	N	1.38 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/26/2001

Appendix D

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-33M	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2001
MW-33M	1	FD	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/7/2001
MW-33M	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/7/2001
MW-33M	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-33M	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/16/1999
MW-33M	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/3/1999
MW-33M	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/20/1998
MW-33S	1	N	0.045 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2011
MW-33S	1	N	0.0287 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2010
MW-33S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/1/2009
MW-33S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2008
MW-33S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/17/2007
MW-33S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2006
MW-33S	1	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2005
MW-33S	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2005
MW-33S	1	N	0.442 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2004
MW-33S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2004
MW-33S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/4/2004
MW-33S	1	N	0.56 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2003
MW-33S	1	N	1.3 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/31/2003
MW-33S	1	N	1.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/6/2003
MW-33S	1	N	1.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2002
MW-33S	1	N	1.6 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-33S	1	N	1.72	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/23/2002
MW-33S	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2001
MW-33S	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-33S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/16/1999
MW-33S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/4/1999
MW-33S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/21/1998
MW-34M1	1	FD	2.97	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/28/2011
MW-34M1	1	N	3.03	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	4/28/2011
MW-34M1	1	N	3.7	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	4/14/2010
MW-34M1	1	N	1.69	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/30/2009
MW-34M1	1	N	0.863 J	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/21/2008
MW-34M1	1	N	1.64	0.465 J	0.275 UJ	0.275 UJ	0.275 UJ	0.275 UJ	0.275 UJ	0.275 UJ	4/25/2007
MW-34M1	1	N	7.35	6.6	0.85	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2006
MW-34M1	1	N	3.1	4.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/21/2005
MW-34M1	1	N	3.32 J	3.7	0.44	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/5/2004
MW-34M1	1	N	5.28	6.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/14/2004
MW-34M1	1	N	3.43	2.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/5/2004
MW-34M1	1	N	6.9	4.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/12/2003
MW-34M1	1	N	8 J	4.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/24/2003
MW-34M1	1	N	8	0.32 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/15/2002

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-34M1	1	N	7.1 J	0.28 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002
MW-34M1	1	N	7.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-34M1	1	N	17.7	0.53	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/26/2001
MW-34M1	1	FD	31.4	0.85	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/31/2001
MW-34M1	1	N	30.8	0.87 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/31/2001
MW-34M1	1	N	46	1.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/5/2001
MW-34M1	1	N	109	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-34M1	1	N	n/a	4.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/17/2000
MW-34M1	1	N	n/a	5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/11/2000
MW-34M1	1	N	n/a	2.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/17/2000
MW-34M1	1	N	n/a	0.79	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/25/1999
MW-34M1	1	N	n/a	0.39	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/1999
MW-34M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/19/1999
MW-34M2	1	N	0.754	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/28/2011
MW-34M2	1	N	1.13	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	4/14/2010
MW-34M2	1	N	0.699 J	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/30/2009
MW-34M2	1	N	3.61	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/21/2008
MW-34M2	1	N	2.05	1.7	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	4/25/2007
MW-34M2	1	N	n/a	2.7	0.27	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/2/2007
MW-34M2	1	N	6.13	4.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2006
MW-34M2	1	N	n/a	3.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/8/2006
MW-34M2	1	N	n/a	4.8	0.55	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/2005
MW-34M2	1	N	3.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2005
MW-34M2	1	N	n/a	2.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/8/2004
MW-34M2	1	N	5.87 J	2.1	0.33	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/5/2004
MW-34M2	1	N	5.23	3.2	0.34 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/14/2004
MW-34M2	1	N	7.02	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/5/2004
MW-34M2	1	N	7.3	3.9	0.34	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/12/2003
MW-34M2	1	N	10 J	1.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/24/2003
MW-34M2	1	N	14	1.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/15/2002
MW-34M2	1	N	17	0.66 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002
MW-34M2	1	N	19.6	0.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-34M2	1	N	5.85 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/26/2001
MW-34M2	1	N	16.2	0.37	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2001
MW-34M2	1	N	28 J	0.87	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/1/2001
MW-34M2	1	N	34	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-34M2	1	N	n/a	2.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/17/2000
MW-34M2	1	N	60 J	3.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2000
MW-34M2	1	N	n/a	4.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/18/2000
MW-34M2	1	N	n/a	1.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/25/1999
MW-34M2	1	N	n/a	1.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/1999
MW-34M2	1	N	n/a	6.2	0.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/19/1999
MW-34M3	1	N	0.027 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	5/3/2011

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-34M3	1	N	0.243	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	4/14/2010
MW-34M3	1	N	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/30/2009
MW-34M3	1	N	1.12	0.232 U	0.232 U	0.232 U	0.232 U	0.232 U	0.232 U	0.232 U	4/23/2008
MW-34M3	1	N	1 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	4/26/2007
MW-34M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2006
MW-34M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/2005
MW-34M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2005
MW-34M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/8/2004
MW-34M3	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2004
MW-34M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/14/2004
MW-34M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/5/2004
MW-34M3	1	N	1 U	0.37	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/12/2003
MW-34M3	1	FD	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/24/2003
MW-34M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/24/2003
MW-34M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/15/2002
MW-34M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002
MW-34M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-34M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/26/2001
MW-34M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/31/2001
MW-34M3	1	N	5 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/1/2001
MW-34M3	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-34M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/17/2000
MW-34M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2000
MW-34M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/18/2000
MW-34M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/25/1999
MW-34M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/1999
MW-34M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/19/1999
MW-35M1	1	N	3.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/25/2004
MW-35M1	1	FD	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/1/2003
MW-35M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/1/2003
MW-35M1	1	N	3.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/8/2003
MW-35M1	1	N	4.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/18/2002
MW-35M1	1	N	5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002
MW-35M1	1	N	6.44 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-35M1	1	N	6.34 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/21/2001
MW-35M1	1	N	5.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2001
MW-35M1	1	N	4 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/4/2001
MW-35M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/27/2001
MW-35M1	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-35M1	1	FD	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/17/2000
MW-35M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/17/2000
MW-35M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2000
MW-35M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ	0.25 U	5/22/2000

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-35M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/28/1999
MW-35M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/1999
MW-35M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/19/1999
MW-35M2	1	N	0.033 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/26/2011
MW-35M2	1	N	0.0244 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2010
MW-35M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2009
MW-35M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/8/2008
MW-35M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2007
MW-35M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2006
MW-35M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2005
MW-35M2	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/25/2004
MW-35M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/17/2004
MW-35M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/8/2003
MW-35M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/18/2002
MW-35M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002
MW-35M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-35M2	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/21/2001
MW-35M2	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2001
MW-35M2	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/7/2001
MW-35M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/27/2001
MW-35M2	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-35M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/17/2000
MW-35M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2000
MW-35M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ	0.25 U	5/22/2000
MW-35M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/28/1999
MW-35M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/1999
MW-35M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/22/1999
MW-35S	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/14/2002
MW-35S	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2001
MW-35S	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/22/2001
MW-35S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/27/2001
MW-35S	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/18/2000
MW-35S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2000
MW-35S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ	0.25 U	5/22/2000
MW-35S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/28/1999
MW-35S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/1999
MW-35S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/22/1999
MW-36M1	1	FD	1.76	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/12/2011
MW-36M1	1	N	1.75	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/12/2011
MW-36M1	1	FD	5.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2010
MW-36M1	1	N	5.26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2010
MW-36M1	1	N	4.26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2009
MW-36M1	1	N	0.738 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/23/2008

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-36M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/26/2007
MW-36M1	1	N	0.624 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2006
MW-36M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/21/2005
MW-36M1	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2004
MW-36M1	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2004
MW-36M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2004
MW-36M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/3/2004
MW-36M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/12/2003
MW-36M1	1	N	2 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/25/2003
MW-36M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2002
MW-36M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-36M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-36M1	1	N	2 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/8/2002
MW-36M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/2/2001
MW-36M1	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/15/2001
MW-36M1	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-36M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2000
MW-36M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/25/1999
MW-36M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/17/1999
MW-36M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/5/1999
MW-36M2	1	N	1.7	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/12/2011
MW-36M2	1	FD	2.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2010
MW-36M2	1	N	2.6	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/13/2010
MW-36M2	1	N	1.92	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/22/2009
MW-36M2	1	N	2.06	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/23/2008
MW-36M2	1	N	1.48	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	4/26/2007
MW-36M2	1	N	2.29	0.25	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2006
MW-36M2	1	N	5.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2005
MW-36M2	1	N	2.9 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2004
MW-36M2	1	N	1.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/22/2004
MW-36M2	1	FD	3.09	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/3/2004
MW-36M2	1	N	3.13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/3/2004
MW-36M2	1	N	4.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/12/2003
MW-36M2	1	N	3.7 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/25/2003
MW-36M2	1	N	4.2 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2002
MW-36M2	1	N	4 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-36M2	1	N	3.44	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-36M2	1	FD	2.16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/8/2002
MW-36M2	1	N	1.86 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/8/2002
MW-36M2	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/2/2001
MW-36M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/2/2001
MW-36M2	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/17/2001
MW-36M2	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-36M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2000
MW-36M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/25/1999
MW-36M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/17/1999
MW-36M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/5/1999
MW-36S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2004
MW-36S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/3/2004
MW-36S	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/12/2003
MW-36S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/12/2003
MW-36S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/14/2002
MW-36S	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/2/2001
MW-36S	1	FD	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-36S	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/18/2000
MW-36S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/20/2000
MW-36S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/25/1999
MW-36S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/17/1999
MW-36S	1	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/1999
MW-36S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/5/1999
MW-73S	1	N	0.548	2.4	0.719	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/18/2011
MW-73S	1	N	0.09	3.49	2.9	0.154 J	0.228	0.208 U	0.208 U	0.208 U	12/22/2010
MW-73S	1	N	0.917	1.22	0.518	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	4/22/2010
MW-73S	1	N	0.598	1.98	0.571	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	11/16/2009
MW-73S	1	N	0.902 J	1.27	0.568	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/29/2009
MW-73S	1	N	0.994 J	1.54 J	0.693 J	0.102 J	0.124 J	0.21 UJ	0.21 UJ	0.21 UJ	12/29/2008
MW-73S	1	FD	1.1	2.44	0.923	0.238 U	0.238 U	0.238 U	0.238 U	0.238 U	4/24/2008
MW-73S	1	N	1.1	2.46	1.04	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	4/24/2008
MW-73S	1	N	1 U	4.32	2.31	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	12/7/2007
MW-73S	1	FD	1 U	2.64	1.32	0.287 U	0.287 U	0.287 U	0.287 UJ	0.287 U	4/30/2007
MW-73S	1	N	1 U	2.6	1.28	0.278 U	0.278 U	0.278 U	0.278 UJ	0.278 U	4/30/2007
MW-73S	1	N	1 U	9.7	3.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/3/2007
MW-73S	1	FD	0.566 J	9.7	3.7	0.29 NJ	0.28	0.25 U	0.25 U	0.25 U	4/12/2006
MW-73S	1	N	0.533 J	9.7	3.7	0.28 NJ	0.28	0.25 U	0.25 U	0.25 U	4/12/2006
MW-73S	1	N	n/a	R	4.8	R	0.25 U	0.25 U	0.25 U	0.25 U	2/8/2006
MW-73S	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/13/2005
MW-73S	1	N	1	9.3	3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2005
MW-73S	1	N	2.46 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/1/2004
MW-73S	1	N	n/a	11	2.6 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/1/2004
MW-73S	1	N	3 J	18	4.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/28/2004
MW-73S	1	N	3.9	12	2.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/27/2003
MW-73S	1	N	1.9	34 J	6.3 J	0.65 J	0.53 J	0.25 U	0.25 U	0.91 J	8/20/2002
MW-73S	1	N	3.3	79	20 J	0.31 J	0.79 J	0.25 UJ	0.25 UJ	0.25 UJ	1/11/2002
MW-73S	1	N	10	22	4.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/14/2001
MW-73S	1	FD	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2000
MW-73S	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2000

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-73S	1	FD	n/a	29	8.4	0.38	0.29 J	0.25 U	0.25 U	0.36 J	11/14/2000
MW-73S	1	N	n/a	28	8.4	0.39	0.26 J	0.25 U	0.25 U	0.36 J	11/14/2000
MW-73S	1	N	n/a	29	6.8	0.54	0.33 J	0.25 U	0.25 U	0.39 J	9/5/2000
MW-73S	1	N	n/a	44	8.6 J	0.74	0.68 J	0.25 U	0.25 U	0.54 J	6/2/2000
MW-73S	1	N	n/a	57	16	0.97	1.1 J	0.75 U	0.75 U	0.75 U	11/2/1999
MW-73S	1	N	n/a	63	18	1 U	1.3 J	1 U	1 U	1 U	9/16/1999
MW-73S	1	N	n/a	50 J	12 J	0.75 U	0.75 J	0.75 U	0.75 U	0.75 U	7/9/1999
MW-74M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/23/2007
MW-74M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2006
MW-74M1	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/2005
MW-74M1	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/8/2004
MW-74M1	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2004
MW-74M1	1	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2004
MW-74M1	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2004
MW-74M1	1	N	0.42 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/2/2004
MW-74M1	1	N	0.9 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/4/2003
MW-74M1	1	FD	0.49 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/24/2003
MW-74M1	1	N	2 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/24/2003
MW-74M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2002
MW-74M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-74M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/5/2002
MW-74M1	1	N	n/a	0.99	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/25/2002
MW-74M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/3/2002
MW-74M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/13/2001
MW-74M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/8/2001
MW-74M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/2/2001
MW-74M1	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-74M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-74M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/1/2000
MW-74M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/14/2000
MW-74M2	1	N	0.254	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/18/2011
MW-74M2	1	N	0.538	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/8/2010
MW-74M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/29/2009
MW-74M2	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/23/2008
MW-74M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/23/2008
MW-74M2	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/24/2007
MW-74M2	1	N	0.274 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/3/2007
MW-74M2	1	N	0.583 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2006
MW-74M2	1	N	0.487 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/14/2005
MW-74M2	1	FD	0.7 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/22/2005
MW-74M2	1	N	0.72 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/22/2005
MW-74M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2005
MW-74M2	1	FD	0.55 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2004

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-74M2	1	N	0.56 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2004
MW-74M2	1	N	0.56 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2004
MW-74M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2004
MW-74M2	1	N	0.39 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/2/2004
MW-74M2	1	FD	0.41 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/4/2003
MW-74M2	1	N	0.39 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/4/2003
MW-74M2	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/25/2003
MW-74M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2002
MW-74M2	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-74M2	1	N	0.45 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/30/2002
MW-74M2	1	N	0.73 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/25/2002
MW-74M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/3/2002
MW-74M2	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2001
MW-74M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/2/2001
MW-74M2	1	FD	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-74M2	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-74M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-74M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/1/2000
MW-74M2	1	FD	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/14/2000
MW-74M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/14/2000
MW-74M3	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/24/2007
MW-74M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2006
MW-74M3	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2005
MW-74M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/11/2004
MW-74M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2004
MW-74M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/2/2004
MW-74M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/4/2003
MW-74M3	1	N	2 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/24/2003
MW-74M3	1	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/19/2002
MW-74M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/19/2002
MW-74M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2002
MW-74M3	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/5/2002
MW-74M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/3/2002
MW-74M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/13/2001
MW-74M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/10/2001
MW-74M3	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2000
MW-74M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-74M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/1/2000
MW-74M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/14/2000
MW-75M1	1	N	0.12	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/18/2011
MW-75M1	1	N	0.056	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/8/2010
MW-75M1	1	N	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/28/2009
MW-75M1	1	N	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/25/2008

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Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-75M1	1	N	1 UJ	0.281 U	0.281 U	0.281 U	0.281 U	0.281 U	0.281 U	0.281 U	4/24/2007
MW-75M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/21/2006
MW-75M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/22/2005
MW-75M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/12/2005
MW-75M1	1	N	0.356 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2004
MW-75M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2004
MW-75M1	1	N	0.524 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2004
MW-75M1	1	N	0.37 J	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/25/2004
MW-75M1	1	N	0.61 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/3/2003
MW-75M1	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/25/2003
MW-75M1	1	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2002
MW-75M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/18/2002
MW-75M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002
MW-75M1	1	N	0.57 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-75M1	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/4/2002
MW-75M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2001
MW-75M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2001
MW-75M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2000
MW-75M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-75M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/1/2000
MW-75M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/27/2000
MW-75M2	1	N	0.51	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	4/18/2011
MW-75M2	1	N	0.358	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/8/2010
MW-75M2	1	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/28/2009
MW-75M2	1	N	1 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/25/2008
MW-75M2	1	N	1 UJ	0.456	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	4/24/2007
MW-75M2	1	N	n/a	0.37	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/3/2007
MW-75M2	1	N	0.514 J	0.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/21/2006
MW-75M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2006
MW-75M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/22/2005
MW-75M2	1	N	1.9 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2005
MW-75M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/8/2004
MW-75M2	1	FD	1.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2004
MW-75M2	1	N	1.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2004
MW-75M2	1	FD	2.46	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2004
MW-75M2	1	N	2.59	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2004
MW-75M2	1	FD	2.84	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/25/2004
MW-75M2	1	N	3.08	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/25/2004
MW-75M2	1	N	4.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/4/2003
MW-75M2	1	N	6.8 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/26/2003
MW-75M2	1	N	3.6 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2002
MW-75M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/18/2002
MW-75M2	1	FD	3.2	0.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-75M2	1	N	2.8	0.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002
MW-75M2	1	N	n/a	0.76 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/28/2002
MW-75M2	1	N	4.89	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/25/2002
MW-75M2	1	N	4.08	0.81 J	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	1/7/2002
MW-75M2	1	N	6.24	1.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2001
MW-75M2	1	FD	9 J	1.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2001
MW-75M2	1	N	9 J	1.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2001
MW-75M2	1	N	5 U	1.2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2000
MW-75M2	1	N	n/a	0.69	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/2/2000
MW-75M2	1	N	n/a	1.6 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/1/2000
MW-75M2	1	N	n/a	1.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/27/2000
MW-75S	1	N	1 UJ	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	0.284 U	4/24/2007
MW-75S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/21/2006
MW-75S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/15/2005
MW-75S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2004
MW-75S	1	N	0 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2004
MW-75S	1	N	1 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/25/2004
MW-75S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/4/2003
MW-75S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002
MW-75S	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/3/2002
MW-75S	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2001
MW-75S	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2001
MW-75S	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2000
MW-75S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-75S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/2/2000
MW-75S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/27/2000
MW-76M1	1	FD	n/a	3.57	2.81	0.105 U	0.045 J	0.105 U	0.105 U	0.105 U	4/20/2011
MW-76M1	1	N	0.296	3.59	2.72	0.108 U	0.078 J	0.108 U	0.108 U	0.108 U	4/20/2011
MW-76M1	1	FD	n/a	13.9	10.1	0.235 U	0.121 J	0.235 U	0.235 U	0.235 U	12/22/2010
MW-76M1	1	N	1.05	13.7	9.82	0.21 U	0.0962 J	0.21 U	0.21 U	0.21 U	12/22/2010
MW-76M1	1	FD	n/a	13.5	5.84	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/8/2010
MW-76M1	1	N	0.904	14.2	5.92	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/8/2010
MW-76M1	1	N	0.425 J	10.6	5.53	0.21 U	0.126 J	0.21 U	0.21 U	0.21 U	4/29/2009
MW-76M1	1	N	1 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/24/2008
MW-76M1	1	N	1 U	3.9	1.35	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	4/20/2007
MW-76M1	1	N	0.322 J	0.46	0.32	0.25 U	0.26	0.25 U	0.25 U	0.25 U	4/19/2006
MW-76M1	1	N	1.6	13	11 J	0.25 U	0.81	0.25 U	0.25 U	0.25 U	4/14/2005
MW-76M1	1	N	47.3	R	R	0.25 U	R	0.25 U	0.25 U	0.25 U	8/11/2004
MW-76M1	1	N	17.9	R	R	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/21/2004
MW-76M1	1	N	16.4	R	R	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/24/2004
MW-76M1	1	N	97 J	170	19 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/27/2003
MW-76M1	1	N	200 J	R	R	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/25/2003
MW-76M1	1	N	11 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2002

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-76M1	1	N	n/a	2.7	1.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/18/2002
MW-76M1	1	N	3.1	14 J	4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002
MW-76M1	1	N	15.3	79	5.3 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-76M1	1	N	30.6	110	3.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/28/2001
MW-76M1	1	N	16	90	2.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/13/2001
MW-76M1	1	N	8	28	1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/7/2001
MW-76M1	1	N	n/a	5.3	0.69 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2000
MW-76M1	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-76M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-76M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/2/2000
MW-76M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/24/2000
MW-76M2	1	FD	n/a	5.95 J	4.78 J	0.053 J	0.144	0.106 U	0.106 U	0.106 U	4/20/2011
MW-76M2	1	N	0.921	5.8	4.48	0.108 U	0.139	0.108 U	0.108 U	0.108 U	4/20/2011
MW-76M2	1	N	1.14	13.7	10.4	0.215 U	0.313	0.215 U	0.215 U	0.215 U	12/22/2010
MW-76M2	1	FD	n/a	9.16	3.62	0.204 U	0.235	0.204 U	0.204 U	0.204 U	4/8/2010
MW-76M2	1	N	1.29	10.4	3.33	0.2 U	0.222 J	0.2 U	0.2 U	0.2 U	4/8/2010
MW-76M2	1	FD	n/a	12.7	7.44	0.206 U	0.528	0.206 U	0.206 U	0.206 U	11/16/2009
MW-76M2	1	N	1.4	12	6.8	0.222 U	0.413	0.222 U	0.222 U	0.222 U	11/16/2009
MW-76M2	1	N	1.28	22.8	9.68	0.215 U	0.558	0.215 U	0.215 U	0.215 U	4/29/2009
MW-76M2	1	N	1.51	21.4	11.5 J	0.206 U	0.58	0.206 U	0.206 U	0.206 U	12/16/2008
MW-76M2	1	N	1.67	22.9	9.15	0.213 U	0.534	0.213 U	0.213 U	0.213 U	4/24/2008
MW-76M2	1	N	0.526 J	9.44	6.14	0.22 U	0.592	0.22 U	0.22 U	0.22 U	12/7/2007
MW-76M2	1	N	1.49	22.6	8.32	0.281 U	0.617	0.281 U	0.281 U	0.281 U	4/23/2007
MW-76M2	1	N	3.5	R	13	0.25 U	0.71	0.25 U	0.25 U	0.25 U	4/19/2006
MW-76M2	1	N	25 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2005
MW-76M2	1	N	n/a	R	R	0.25 U	R	0.25 U	R	0.25 U	4/13/2005
MW-76M2	1	N	57.2	R	R	0.25 U	R	0.25 U	R	0.25 U	8/11/2004
MW-76M2	1	N	93.1	R	R	0.25 U	R	0.25 U	R	0.25 U	4/22/2004
MW-76M2	1	N	115	R	R	0.25 U	R	0.25 U	0.82 U	0.25 U	2/24/2004
MW-76M2	1	N	210	150	29	0.25 U	0.25 U	0.25 U	0.64 J	0.25 U	12/3/2003
MW-76M2	1	FD	500 J	R	R	0.25 U	R	0.25 U	0.25 U	0.25 U	3/26/2003
MW-76M2	1	N	500 J	R	R	0.25 U	R	0.25 U	0.25 U	0.25 U	3/26/2003
MW-76M2	1	N	290	160	16	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/20/2002
MW-76M2	1	N	250	160 J	13 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/19/2002
MW-76M2	1	N	174	130	9.2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-76M2	1	N	126	92	9 J	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	1/7/2002
MW-76M2	1	FD	22.5	48	6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/13/2001
MW-76M2	1	N	22.1	51	6.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/13/2001
MW-76M2	1	N	17	56	6.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/7/2001
MW-76M2	1	N	n/a	46	5.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2000
MW-76M2	1	N	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-76M2	1	N	n/a	31	5.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/2/2000
MW-76M2	1	N	n/a	37 J	5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/2/2000

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-76M2	1	FD	n/a	29	3.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/24/2000
MW-76M2	1	N	n/a	31	4.2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/24/2000
MW-76S	1	N	0.744	0.291	0.104 U	0.104 U	0.104 U	0.104 U	0.104 U	0.104 U	4/20/2011
MW-76S	1	N	0.521	1.67	0.538	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	4/8/2010
MW-76S	1	N	0.748 J	0.552	0.336	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/29/2009
MW-76S	1	N	1.11	3.44	0.629	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/24/2008
MW-76S	1	N	2.58	7.88	2.52	0.281 U	0.281 U	0.281 U	0.281 U	0.281 U	4/23/2007
MW-76S	1	N	1.92	3.8	0.96	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2006
MW-76S	1	N	3.2 J	3.9 J	0.48 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/13/2005
MW-76S	1	N	2.11	3.5	3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/11/2004
MW-76S	1	N	11.3	14	6.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/21/2004
MW-76S	1	N	19.1	R	R	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/24/2004
MW-76S	1	N	19	18	5.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/27/2003
MW-76S	1	N	26 J	10	5.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/18/2002
MW-76S	1	N	88	31 J	5.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002
MW-76S	1	N	175	25	1.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-76S	1	N	41.2	9.9 J	1 J	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	12/28/2001
MW-76S	1	N	13.3	4.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/10/2001
MW-76S	1	N	7	2.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/7/2001
MW-76S	1	N	n/a	1.3	0.58 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2000
MW-76S	1	N	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2000
MW-76S	1	N	n/a	4.1	2.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-76S	1	N	n/a	7.5 J	2.5 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/2/2000
MW-76S	1	N	n/a	11	0.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/20/2000
MW-77M1	1	N	0.08	0.105 UJ	0.105 UJ	0.105 UJ	0.105 UJ	0.105 UJ	0.105 UJ	0.105 UJ	4/20/2011
MW-77M1	1	N	0.105	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	4/8/2010
MW-77M1	1	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/21/2009
MW-77M1	1	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/25/2008
MW-77M1	1	N	1 U	0.272 U	0.272 U	0.272 U	0.272 UJ	0.272 U	0.272 UJ	0.272 U	4/23/2007
MW-77M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/20/2006
MW-77M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/23/2005
MW-77M1	1	FD	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2005
MW-77M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2005
MW-77M1	1	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2004
MW-77M1	1	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2004
MW-77M1	1	N	1 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/28/2004
MW-77M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2004
MW-77M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/12/2004
MW-77M1	1	N	0.81 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/27/2003
MW-77M1	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/26/2003
MW-77M1	1	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/19/2002
MW-77M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/19/2002
MW-77M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/7/2002

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-77M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/24/2002
MW-77M1	1	N	0.436 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/26/2001
MW-77M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/13/2001
MW-77M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/11/2001
MW-77M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2000
MW-77M1	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-77M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-77M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/2/2000
MW-77M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/24/2000
MW-77M2	1	FD	n/a	0.672 J	0.601 J	0.067 J	0.142 J	0.105 UJ	0.105 UJ	0.105 UJ	4/20/2011
MW-77M2	1	N	0.321	0.653	0.654	0.069 J	0.128	0.105 U	0.105 U	0.105 U	4/20/2011
MW-77M2	1	FD	n/a	5.09	3.9	0.176 J	0.372	0.208 U	0.208 U	0.208 U	12/21/2010
MW-77M2	1	N	0.477	4.89	3.82	0.175 J	0.432	0.213 U	0.213 U	0.213 U	12/21/2010
MW-77M2	1	FD	n/a	29.5	12.8	0.261	0.588	0.204 U	0.204 U	0.204 U	4/8/2010
MW-77M2	1	N	1.27	29.8	13	0.239 J	0.58 J	0.227 UJ	0.227 UJ	0.227 UJ	4/8/2010
MW-77M2	1	N	1.89	30.1	5.21	0.198 J	0.392	0.206 U	0.206 U	0.206 U	11/16/2009
MW-77M2	1	FD	n/a	9.76	4.45	0.162 J	0.399	0.22 U	0.22 U	0.22 U	4/21/2009
MW-77M2	1	N	0.838 J	9.76	4.54	0.171 J	0.402	0.22 U	0.22 U	0.22 U	4/21/2009
MW-77M2	1	N	1.1	11.9 J	6.53 J	0.15 J	0.356	0.208 U	0.208 U	0.208 U	12/16/2008
MW-77M2	1	N	2.28	37.4	12.5	0.108 J	0.263	0.217 U	0.217 U	0.217 U	4/25/2008
MW-77M2	1	N	3.64	54.8	13.6	0.168 J	0.636	0.215 U	0.215 U	0.215 U	12/6/2007
MW-77M2	1	N	2.64	37.4	15.7	0.33	0.99	0.287 U	0.287 U	0.287 U	4/23/2007
MW-77M2	1	N	7.08	R	R	R	1.4	0.25 U	R	0.25 U	4/20/2006
MW-77M2	1	N	7	R	R	0.25 U	R	0.25 U	0.25 U	0.25 U	4/20/2005
MW-77M2	1	FD	5.1	12	1.9	0.25 U	0.53 J	0.25 U	0.25 U	0.25 U	7/28/2004
MW-77M2	1	N	5.1	11	1.9	0.25 U	0.56 J	0.25 U	0.25 U	0.25 U	7/28/2004
MW-77M2	1	N	n/a	14	1.8	0.25 U	0.56	0.25 U	0.25 U	0.25 U	4/5/2004
MW-77M2	1	N	5.7 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2004
MW-77M2	1	N	5.32	12	2	0.25 U	0.57	0.25 U	0.25 U	0.25 U	2/12/2004
MW-77M2	1	N	9.1	14	2.3	0.25 U	0.69	0.25 U	0.25 U	0.25 U	9/27/2003
MW-77M2	1	N	5.4 J	10	1	0.25 U	0.6	0.25 U	0.25 U	0.25 U	3/26/2003
MW-77M2	1	N	7.2	8	0.54	0.25 U	0.48 J	0.25 U	0.25 U	0.25 U	11/19/2002
MW-77M2	1	N	7.2 J	5	0.61	0.25 U	0.65	0.25 U	0.25 U	0.25 U	8/7/2002
MW-77M2	1	N	8.01	5.4	1.5 J	0.25 U	0.89	0.25 U	0.25 U	0.25 U	4/24/2002
MW-77M2	1	N	12.3	26	3.2	0.25 U	1 J	0.25 U	0.25 U	0.25 U	12/26/2001
MW-77M2	1	N	13.9	29	7.1	0.25 U	1.6 J	0.25 U	0.25 U	0.25 U	8/10/2001
MW-77M2	1	N	16 J	39	9.3 J	0.25 U	1.5	0.25 U	0.25 U	0.25 U	5/10/2001
MW-77M2	1	N	n/a	93	18 J	0.25 U	2.2 J	0.25 U	0.25 U	0.25 U	12/7/2000
MW-77M2	1	N	28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-77M2	1	N	n/a	97 J	20 J	0.25 U	2 J	0.25 U	0.25 U	0.25 U	8/1/2000
MW-77M2	1	N	n/a	100 J	25 J	0.25 U	1.8 J	0.25 U	0.25 U	0.25 U	5/2/2000
MW-77M2	1	N	n/a	150	24	0.25 U	1.8 NJ	0.25 U	0.25 U	0.25 U	1/25/2000
MW-77S	1	N	0.027 J	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	4/20/2011

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-77S	1	N	0.0245 J	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	4/13/2010
MW-77S	1	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/21/2009
MW-77S	1	N	1 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/25/2008
MW-77S	1	N	1 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	4/23/2007
MW-77S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/20/2006
MW-77S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/21/2005
MW-77S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/28/2004
MW-77S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2004
MW-77S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/12/2004
MW-77S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/27/2003
MW-77S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/7/2002
MW-77S	1	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/29/2002
MW-77S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/29/2002
MW-77S	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/26/2001
MW-77S	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/24/2001
MW-77S	1	FD	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/10/2001
MW-77S	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/10/2001
MW-77S	1	FD	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2000
MW-77S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2000
MW-77S	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-77S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-77S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/2/2000
MW-77S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/24/2000
MW-78M1	1	N	0.06	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	4/20/2011
MW-78M1	1	N	0.26	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/13/2010
MW-78M1	1	N	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/28/2009
MW-78M1	1	N	1 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/23/2008
MW-78M1	1	N	1 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	4/20/2007
MW-78M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/2/2007
MW-78M1	1	N	0.339 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2006
MW-78M1	1	FD	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2006
MW-78M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2006
MW-78M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/23/2005
MW-78M1	1	N	2.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2005
MW-78M1	1	N	n/a	0.56	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/8/2004
MW-78M1	1	N	2.84	0.26	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/11/2004
MW-78M1	1	N	4.37	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2004
MW-78M1	1	N	4.83	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/23/2004
MW-78M1	1	N	5.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/4/2003
MW-78M1	1	N	4.9 J	0.38 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/26/2003
MW-78M1	1	N	4.1	0.35	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/20/2002
MW-78M1	1	FD	3 J	0.42 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002
MW-78M1	1	N	4.6 J	0.4 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-78M1	1	N	2.07	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/25/2002
MW-78M1	1	N	0.396 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/27/2001
MW-78M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/14/2001
MW-78M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/10/2001
MW-78M1	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-78M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/2/2000
MW-78M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/8/2000
MW-78M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2000
MW-78M2	1	N	0.6	0.104 U	0.104 U	0.104 U	0.104 U	0.104 U	0.104 U	0.104 U	4/20/2011
MW-78M2	1	N	0.754	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	4/13/2010
MW-78M2	1	N	1 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	4/28/2009
MW-78M2	1	FD	0.379 J	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	4/24/2008
MW-78M2	1	N	0.442 J	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/24/2008
MW-78M2	1	FD	0.82 J	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	4/20/2007
MW-78M2	1	N	0.866 J	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	4/20/2007
MW-78M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/2/2007
MW-78M2	1	N	1.05	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2006
MW-78M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/8/2006
MW-78M2	1	FD	n/a	0.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/23/2005
MW-78M2	1	N	n/a	0.98	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/23/2005
MW-78M2	1	N	3.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2005
MW-78M2	1	N	n/a	0.59	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/8/2004
MW-78M2	1	N	6.48	1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/12/2004
MW-78M2	1	N	8.2	1 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2004
MW-78M2	1	FD	8.18 J	1 J	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/24/2004
MW-78M2	1	N	8.34	0.94 J	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/24/2004
MW-78M2	1	N	11	0.45	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/4/2003
MW-78M2	1	N	4.7 J	0.96	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/27/2003
MW-78M2	1	N	8.7	0.87	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/20/2002
MW-78M2	1	N	6.3 J	0.65 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002
MW-78M2	1	N	4.75	0.38	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/25/2002
MW-78M2	1	N	4.43	0.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/28/2001
MW-78M2	1	N	11.4	0.48	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/15/2001
MW-78M2	1	N	9 J	0.25	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/10/2001
MW-78M2	1	N	19	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-78M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2000
MW-78M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2000
MW-78M2	1	FD	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2000
MW-78M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2000
MW-78M3	1	N	1 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	4/20/2007
MW-78M3	1	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2006
MW-78M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2006
MW-78M3	1	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/20/2005

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-78M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/20/2005
MW-78M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/12/2004
MW-78M3	1	N	0 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2004
MW-78M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/23/2004
MW-78M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/4/2003
MW-78M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/26/2003
MW-78M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/20/2002
MW-78M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/20/2002
MW-78M3	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/25/2002
MW-78M3	1	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/28/2001
MW-78M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/15/2001
MW-78M3	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/11/2001
MW-78M3	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2000
MW-78M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/2/2000
MW-78M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2000
MW-78M3	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2000
MW-79M1	1	N	1 U	0.291 U	0.291 U	0.291 U	0.291 U	0.291 U	0.291 UJ	0.291 U	4/27/2007
MW-79M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/12/2006
MW-79M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/30/2005
MW-79M1	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/29/2004
MW-79M1	1	N	1 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	5/15/2003
MW-79M1	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/25/2002
MW-79M1	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/2001
MW-79M1	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2000
MW-79M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-79M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/10/2000
MW-79M1	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/25/2000
MW-79M2	1	N	1 U	0.281 U	0.281 U	0.281 U	0.281 U	0.281 U	0.281 UJ	0.281 U	4/27/2007
MW-79M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/12/2006
MW-79M2	1	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/30/2005
MW-79M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/30/2005
MW-79M2	1	FD	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/29/2004
MW-79M2	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/29/2004
MW-79M2	1	FD	1 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/15/2003
MW-79M2	1	N	1 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/15/2003
MW-79M2	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/25/2002
MW-79M2	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/2001
MW-79M2	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2000
MW-79M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-79M2	1	FD	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2000
MW-79M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/9/2000
MW-79M2	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/25/2000
MW-79S	1	N	1 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 UJ	0.275 U	4/27/2007

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

Demolition Area 1- 2011 Annual Report

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-79S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/12/2006
MW-79S	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/30/2005
MW-79S	1	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/29/2004
MW-79S	1	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/16/2001
MW-79S	1	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2000
MW-79S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/1/2000
MW-79S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/8/2000
MW-79S	1	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/25/2000
PW-304	1	N	1 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	5/7/2009
PW-304	1	N	1 U	0.232 U	0.232 U	0.232 U	0.232 U	0.232 U	0.232 U	0.232 U	1/16/2008
PW-304	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/21/2005
PW-304	1	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/7/2004
D1-EW-503	2	N	0.4	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	8/23/2011
D1-EW-503	2	N	0.423	0.225 U	0.225 U	0.225 U	0.225 U	0.225 U	0.225 U	0.225 U	4/19/2011
D1-EW-503	2	N	0.404	0.241 U	0.241 U	0.241 U	0.241 U	0.241 U	0.241 U	0.241 U	12/21/2010
D1-EW-503	2	N	0.389	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	8/18/2010
D1-EW-503	2	N	0.435	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/19/2010
D1-EW-503	2	N	0.479	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	12/2/2009
D1-EW-503	2	N	0.368 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	6/9/2009
D1-EW-503	2	N	1.5	0.35	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/16/2008
D1-EW-503	2	N	3.98	1.45	0.22 U	0.22 U	0.22 U	0.22 U	0.22 UJ	0.22 U	4/23/2008
MW-173M1	2	N	1 U	0.266 U	0.266 U	0.266 U	0.266 U	0.266 U	0.266 U	0.266 U	4/10/2007
MW-173M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/10/2006
MW-173M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2005
MW-173M1	2	N	0 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2004
MW-173M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/28/2003
MW-173M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/14/2002
MW-173M1	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/14/2002
MW-173M1	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/3/2002
MW-173M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/3/2002
MW-173M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/23/2002
MW-173M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/15/2002
MW-173M1	2	N	2 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	1/25/2002
MW-173M1	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/8/2001
MW-173M1	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/18/2001
MW-173M2	2	FD	1 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	4/10/2007
MW-173M2	2	N	1 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 UJ	0.269 U	4/10/2007
MW-173M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/10/2006
MW-173M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2005
MW-173M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-173M2	2	N	0 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2004
MW-173M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/10/2004
MW-173M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/14/2003

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-173M2	2	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/28/2003
MW-173M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/28/2003
MW-173M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/14/2002
MW-173M2	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/14/2002
MW-173M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2002
MW-173M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2002
MW-173M2	2	N	2 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/13/2002
MW-173M2	2	N	2 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	1/25/2002
MW-173M2	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/8/2001
MW-173M2	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/19/2001
MW-173M3	2	N	1 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	4/10/2007
MW-173M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/27/2006
MW-173M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/11/2006
MW-173M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-173M3	2	N	0.45 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2005
MW-173M3	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2004
MW-173M3	2	N	0.621 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-173M3	2	FD	0.532 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2004
MW-173M3	2	N	0.75 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2004
MW-173M3	2	N	0.842 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/11/2004
MW-173M3	2	FD	0.602 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/14/2003
MW-173M3	2	N	0.653 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/14/2003
MW-173M3	2	N	1.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/27/2003
MW-173M3	2	N	0.48 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/15/2002
MW-173M3	2	N	0.7 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/9/2002
MW-173M3	2	N	0.88 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/19/2002
MW-173M3	2	N	0.67 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/12/2002
MW-173M3	2	N	0.63 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/25/2002
MW-173M3	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/8/2001
MW-173M3	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/19/2001
MW-175M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/10/2007
MW-175M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2006
MW-175M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/8/2005
MW-175M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/28/2004
MW-175M1	2	N	0 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2004
MW-175M1	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/31/2003
MW-175M1	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/30/2003
MW-175M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/22/2003
MW-175M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/15/2002
MW-175M1	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/15/2002
MW-175M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/12/2002
MW-175M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2002
MW-175M1	2	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/28/2002

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-175M1	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/7/2001
MW-175M1	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/22/2001
MW-175M1	2	N	5 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/13/2001
MW-175M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/10/2007
MW-175M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2006
MW-175M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-175M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/8/2005
MW-175M2	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2004
MW-175M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/28/2004
MW-175M2	2	N	0 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2004
MW-175M2	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/31/2003
MW-175M2	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/30/2003
MW-175M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/22/2003
MW-175M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/15/2002
MW-175M2	2	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/13/2002
MW-175M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/13/2002
MW-175M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2002
MW-175M2	2	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/28/2002
MW-175M2	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/8/2001
MW-175M2	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/14/2001
MW-175M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2007
MW-175M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2006
MW-175M3	2	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-175M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-175M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/8/2005
MW-175M3	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2004
MW-175M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/28/2004
MW-175M3	2	N	0 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2004
MW-175M3	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/31/2003
MW-175M3	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/30/2003
MW-175M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/22/2003
MW-175M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/15/2002
MW-175M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/13/2002
MW-175M3	2	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2002
MW-175M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2002
MW-175M3	2	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/28/2002
MW-175M3	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/8/2001
MW-175M3	2	N	5 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/15/2001
MW-186M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2002
MW-186M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/8/2002
MW-186M1	2	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/24/2002
MW-186M2	2	N	1 U	0.25 U	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/29/2002
MW-186M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/8/2002

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-186M2	2	N	2 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	1/23/2002
MW-210M1	2	N	0.288	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/19/2011
MW-210M1	2	N	0.193	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/20/2010
MW-210M1	2	N	1.18	0.182 J	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	5/7/2009
MW-210M1	2	N	8.26	0.279	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	4/17/2008
MW-210M1	2	N	7.74	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	4/17/2007
MW-210M1	2	FD	4.77	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/28/2006
MW-210M1	2	N	4.67	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/28/2006
MW-210M1	2	N	4.07	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/17/2006
MW-210M1	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2006
MW-210M1	2	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2005
MW-210M1	2	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/6/2004
MW-210M1	2	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/5/2004
MW-210M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/20/2004
MW-210M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/10/2004
MW-210M1	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/5/2004
MW-210M1	2	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/21/2003
MW-210M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/21/2003
MW-210M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/28/2002
MW-210M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/6/2002
MW-210M2	2	FD	2.78	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2011
MW-210M2	2	N	2.81	0.208 UJ	0.208 UJ	0.208 UJ	0.208 UJ	0.208 UJ	0.208 UJ	0.208 UJ	4/19/2011
MW-210M2	2	FD	3.54	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/23/2010
MW-210M2	2	N	3.48	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	12/23/2010
MW-210M2	2	FD	3.96	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2010
MW-210M2	2	N	3.9	0.622	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/20/2010
MW-210M2	2	N	3.22	0.414	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	11/16/2009
MW-210M2	2	N	1.94	0.408	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	5/7/2009
MW-210M2	2	N	2.12	0.616 J	0.299 J	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	12/30/2008
MW-210M2	2	N	3.98	2.23	0.587	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	4/21/2008
MW-210M2	2	N	3.31	1.12	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	1/31/2008
MW-210M2	2	N	1.39	0.643	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	12/6/2007
MW-210M2	2	N	243	53.4	3.96	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	4/17/2007
MW-210M2	2	N	226	60	3.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/28/2006
MW-210M2	2	N	95.1	21 J	0.95	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/17/2006
MW-210M2	2	N	n/a	R	R	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2006
MW-210M2	2	FD	99	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/15/2005
MW-210M2	2	N	102	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/15/2005
MW-210M2	2	N	15	1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/21/2005
MW-210M2	2	N	56 J	5.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/6/2004
MW-210M2	2	N	59 J	7.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/5/2004
MW-210M2	2	FD	43	4.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/20/2004
MW-210M2	2	N	44	3.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/20/2004

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-210M2	2	N	23	1.4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/11/2004
MW-210M2	2	N	n/a	0.88	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/5/2004
MW-210M2	2	N	n/a	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	2/28/2003
MW-210M2	2	N	9.93	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/28/2002
MW-210M2	2	FD	11	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/6/2002
MW-210M2	2	N	12	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/6/2002
MW-210M3	2	N	0.031 J	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	4/19/2011
MW-210M3	2	N	0.0422 J	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	4/20/2010
MW-210M3	2	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	5/7/2009
MW-210M3	2	N	1 U	0.225 U	0.225 U	0.225 U	0.225 U	0.225 U	0.225 U	0.225 U	4/21/2008
MW-210M3	2	FD	1 UJ	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	4/18/2007
MW-210M3	2	N	1 UJ	0.287 U	0.287 U	0.287 U	0.287 U	0.287 U	0.287 U	0.287 U	4/18/2007
MW-210M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/17/2006
MW-210M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/20/2005
MW-210M3	2	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/5/2004
MW-210M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/20/2004
MW-210M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/11/2004
MW-210M3	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/5/2004
MW-210M3	2	N	n/a	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	2/28/2003
MW-210M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/25/2002
MW-210M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/6/2002
MW-211M1	2	FD	59.8	14.3	0.791	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/26/2011
MW-211M1	2	N	60.2	14.9	0.908	0.216 U	0.216 U	0.216 U	0.216 U	0.216 U	4/26/2011
MW-211M1	2	FD	62.8	20.4	0.862	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	12/21/2010
MW-211M1	2	N	64.8	21.8	0.91	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	12/21/2010
MW-211M1	2	FD	92.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2010
MW-211M1	2	N	93.7	15	0.474 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/27/2010
MW-211M1	2	FD	98.7	11.4	0.181 J	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	11/18/2009
MW-211M1	2	N	98.4	11.4	0.196 J	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	11/18/2009
MW-211M1	2	FD	99.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/8/2009
MW-211M1	2	N	97.1	8.48	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	5/8/2009
MW-211M1	2	FD	112	8.22	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	12/23/2008
MW-211M1	2	N	116	8.22 J	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	12/23/2008
MW-211M1	2	N	149	8.34	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/17/2008
MW-211M1	2	N	135	9.51	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	12/5/2007
MW-211M1	2	N	181	6.45	0.275 U	0.275 U	0.275 U	0.275 U	0.275 UJ	0.275 U	4/9/2007
MW-211M1	2	N	133	5.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/27/2006
MW-211M1	2	N	89.7	4.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/10/2006
MW-211M1	2	N	n/a	5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2006
MW-211M1	2	N	64.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2005
MW-211M1	2	FD	50.8	5.8	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2005
MW-211M1	2	N	50.6	5.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2005
MW-211M1	2	N	25 J	4	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2005

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-211M1	2	N	33 J	7.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/6/2004
MW-211M1	2	N	13	1.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2004
MW-211M1	2	N	11	1.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/21/2004
MW-211M1	2	N	9.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/10/2004
MW-211M1	2	N	5.6	0.56	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/4/2004
MW-211M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/28/2003
MW-211M1	2	FD	0.51 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/28/2002
MW-211M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/28/2002
MW-211M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/6/2002
MW-211M2	2	N	0.031 J	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/26/2011
MW-211M2	2	N	0.0222 J	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	12/21/2010
MW-211M2	2	N	0.0278 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/27/2010
MW-211M2	2	N	0.0398 J	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	11/18/2009
MW-211M2	2	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	5/8/2009
MW-211M2	2	N	1 U	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	12/29/2008
MW-211M2	2	N	1 U	0.232 U	0.232 U	0.232 U	0.232 U	0.232 U	0.232 U	0.232 U	4/17/2008
MW-211M2	2	N	1 U	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	12/5/2007
MW-211M2	2	N	0.231 J	0.281 U	0.281 U	0.281 U	0.281 U	0.281 U	0.281 UJ	0.281 U	4/9/2007
MW-211M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/27/2006
MW-211M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/10/2006
MW-211M2	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/9/2006
MW-211M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2005
MW-211M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2005
MW-211M2	2	N	3 J	0.38	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2005
MW-211M2	2	FD	0.66 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/6/2004
MW-211M2	2	N	0.72 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/6/2004
MW-211M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2004
MW-211M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/21/2004
MW-211M2	2	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/11/2004
MW-211M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/11/2004
MW-211M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/4/2004
MW-211M2	2	N	3.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/28/2003
MW-211M2	2	N	3.02	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/29/2002
MW-211M2	2	N	3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/6/2002
MW-211M3	2	N	0.042 J	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/26/2011
MW-211M3	2	N	0.0287 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/27/2010
MW-211M3	2	N	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	5/8/2009
MW-211M3	2	N	1 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	4/17/2008
MW-211M3	2	N	1 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 UJ	0.278 U	4/9/2007
MW-211M3	2	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/10/2006
MW-211M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/10/2006
MW-211M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2005
MW-211M3	2	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2005

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-211M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2004
MW-211M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/21/2004
MW-211M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/11/2004
MW-211M3	2	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2004
MW-211M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2004
MW-211M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/28/2003
MW-211M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/28/2002
MW-211M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/6/2002
MW-221M1	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2007
MW-221M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/7/2006
MW-221M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-221M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2005
MW-221M1	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2004
MW-221M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2004
MW-221M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2004
MW-221M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2003
MW-221M1	2	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/1/2002
MW-221M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/1/2002
MW-221M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2002
MW-221M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/6/2007
MW-221M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/7/2006
MW-221M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-221M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2005
MW-221M2	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2004
MW-221M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2004
MW-221M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/20/2004
MW-221M2	2	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/15/2004
MW-221M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/15/2004
MW-221M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2004
MW-221M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2003
MW-221M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/1/2002
MW-221M2	2	FD	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2002
MW-221M2	2	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2002
MW-221M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/6/2007
MW-221M3	2	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/7/2006
MW-221M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/7/2006
MW-221M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-221M3	2	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2005
MW-221M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2005
MW-221M3	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2004
MW-221M3	2	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2004
MW-221M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2004
MW-221M3	2	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2004

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-221M3	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2004
MW-221M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2003
MW-221M3	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/1/2002
MW-221M3	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2002
MW-221M3	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/30/2002
MW-341M1	2	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2011
MW-341M1	2	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2010
MW-341M1	2	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/8/2009
MW-341M1	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2008
MW-341M1	2	FD	1 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 UJ	0.278 U	4/6/2007
MW-341M1	2	N	1 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 UJ	0.272 U	4/6/2007
MW-341M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2006
MW-341M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2005
MW-341M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/10/2004
MW-341M1	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/30/2004
MW-341M2	2	N	0.637	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2011
MW-341M2	2	N	0.743	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2010
MW-341M2	2	N	0.501 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/8/2009
MW-341M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2008
MW-341M2	2	N	1 U	0.278 UJ	0.278 UJ	0.278 UJ	0.278 UJ	0.278 UJ	0.278 UJ	0.278 UJ	4/6/2007
MW-341M2	2	N	0.228 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2006
MW-341M2	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2005
MW-341M2	2	N	0.56 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2005
MW-341M2	2	N	0.428 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/10/2004
MW-341M2	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/30/2004
MW-341M3	2	N	0.984	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	4/14/2011
MW-341M3	2	N	1.58	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/28/2010
MW-341M3	2	FD	2.36	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2010
MW-341M3	2	N	2.46	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	4/16/2010
MW-341M3	2	N	2.31	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/16/2009
MW-341M3	2	N	1.29	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	5/8/2009
MW-341M3	2	N	1.11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2008
MW-341M3	2	N	0.63 J	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	4/16/2008
MW-341M3	2	N	1.03	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/6/2007
MW-341M3	2	N	0.953 J	0.275 U	0.275 U	0.275 U	0.275 U	0.275 U	0.275 UJ	0.275 U	4/9/2007
MW-341M3	2	N	2.64	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/27/2006
MW-341M3	2	N	1.87	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/2/2006
MW-341M3	2	N	4.66	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2006
MW-341M3	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/9/2006
MW-341M3	2	N	7.52	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2005
MW-341M3	2	N	20	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2005
MW-341M3	2	N	40 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2005
MW-341M3	2	N	15.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/10/2004

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-341M3	2	N	2.95	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/18/2004
MW-341M4	2	N	0.169	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	4/14/2011
MW-341M4	2	N	0.089	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/16/2010
MW-341M4	2	N	1 U	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	5/8/2009
MW-341M4	2	N	1 U	0.235 UJ	0.235 UJ	0.235 UJ	0.235 UJ	0.235 UJ	0.235 UJ	0.235 UJ	4/16/2008
MW-341M4	2	N	1 U	0.266 U	0.266 U	0.266 U	0.266 U	0.266 U	0.266 UJ	0.266 U	4/9/2007
MW-341M4	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/27/2006
MW-341M4	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/2/2006
MW-341M4	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2006
MW-341M4	2	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/9/2006
MW-341M4	2	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/8/2005
MW-341M4	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2005
MW-341M4	2	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2005
MW-341M4	2	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/18/2005
MW-341M4	2	N	0.442 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/10/2004
MW-341M4	2	N	14.7	0.7	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/31/2004
MW-433	2	N	n/a	3.2	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/5/2007
MW-225M1	3	N	1 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	4/11/2007
MW-225M1	3	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/21/2006
MW-225M1	3	FD	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2006
MW-225M1	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2006
MW-225M1	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2006
MW-225M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2006
MW-225M1	3	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2006
MW-225M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2006
MW-225M1	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/9/2006
MW-225M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2005
MW-225M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/4/2005
MW-225M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2005
MW-225M1	3	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2004
MW-225M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/6/2004
MW-225M1	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2004
MW-225M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2004
MW-225M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/27/2003
MW-225M1	3	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/12/2002
MW-225M1	3	N	1 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	11/12/2002
MW-225M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/5/2002
MW-225M2	3	N	0.05 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	8/24/2011
MW-225M2	3	N	0.05 U	0.106 U	0.106 U	0.106 U	0.106 U	0.106 U	0.106 U	0.106 U	4/21/2011
MW-225M2	3	N	0.05 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	12/21/2010
MW-225M2	3	N	0.05 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	8/18/2010
MW-225M2	3	N	0.0096 J	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	4/16/2010
MW-225M2	3	N	0.05 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	11/18/2009

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-225M2	3	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	7/29/2009
MW-225M2	3	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/15/2009
MW-225M2	3	N	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	12/23/2008
MW-225M2	3	N	1 U	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	9/2/2008
MW-225M2	3	N	1 UJ	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/14/2008
MW-225M2	3	N	1 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	12/5/2007
MW-225M2	3	N	1 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	4/11/2007
MW-225M2	3	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/21/2006
MW-225M2	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2006
MW-225M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2006
MW-225M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2006
MW-225M2	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/9/2006
MW-225M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2005
MW-225M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/4/2005
MW-225M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2005
MW-225M2	3	FD	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2004
MW-225M2	3	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/7/2004
MW-225M2	3	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2004
MW-225M2	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/2/2004
MW-225M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/21/2004
MW-225M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/15/2004
MW-225M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/4/2004
MW-225M2	3	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/27/2003
MW-225M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/27/2003
MW-225M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/14/2002
MW-225M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/5/2002
MW-225M3	3	N	0.072	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	8/24/2011
MW-225M3	3	N	0.065	0.102 U	0.102 U	0.102 U	0.102 U	0.102 U	0.102 U	0.102 U	4/21/2011
MW-225M3	3	N	0.169	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	12/21/2010
MW-225M3	3	N	0.102	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	8/18/2010
MW-225M3	3	N	0.093	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/19/2010
MW-225M3	3	N	0.088	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	11/18/2009
MW-225M3	3	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	7/29/2009
MW-225M3	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2009
MW-225M3	3	N	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/15/2009
MW-225M3	3	N	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	12/23/2008
MW-225M3	3	FD	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	9/2/2008
MW-225M3	3	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	9/2/2008
MW-225M3	3	N	2.37	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	4/14/2008
MW-225M3	3	FD	13.8	1.14	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	12/5/2007
MW-225M3	3	N	13.5	0.894 J	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	12/5/2007
MW-225M3	3	N	20.7	1.22	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	0.278 U	4/11/2007
MW-225M3	3	N	17.6 J	0.98 J	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	12/21/2006

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-225M3	3	N	n/a	1.3	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2006
MW-225M3	3	N	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2006
MW-225M3	3	N	11.3	1.1	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2006
MW-225M3	3	N	n/a	0.85	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/7/2006
MW-225M3	3	N	14.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2005
MW-225M3	3	FD	20.9 J	1.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/4/2005
MW-225M3	3	N	20.8 J	1.6	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/4/2005
MW-225M3	3	N	7.7 J	0.33	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2005
MW-225M3	3	N	3.2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/8/2004
MW-225M3	3	FD	2 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2004
MW-225M3	3	N	2.1 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2004
MW-225M3	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/2/2004
MW-225M3	3	N	2.62	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/25/2004
MW-225M3	3	N	2.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/15/2004
MW-225M3	3	N	1.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/4/2004
MW-225M3	3	N	0.62 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/27/2003
MW-225M3	3	N	1.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/14/2002
MW-225M3	3	N	2.9	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2002
MW-231M1	3	N	0.222 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/12/2007
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/22/2006
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/1/2006
MW-231M1	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/6/2006
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/6/2006
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2005
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2005
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-231M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2004
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/20/2004
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/11/2004
MW-231M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/30/2004
MW-231M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/6/2003
MW-231M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/14/2002
MW-231M1	3	N	0.51 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/26/2002
MW-231M2	3	N	0.156	0.104 U	0.104 U	0.104 U	0.104 U	0.104 U	0.104 U	0.104 U	4/21/2011
MW-231M2	3	N	0.203	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/19/2010
MW-231M2	3	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	7/29/2009
MW-231M2	3	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/15/2009
MW-231M2	3	N	1 U	0.213 UJ	0.213 UJ	0.213 UJ	0.213 UJ	0.213 UJ	0.213 UJ	0.213 UJ	12/22/2008
MW-231M2	3	N	1 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	8/29/2008
MW-231M2	3	N	1 U	0.444 U	0.444 U	0.444 U	0.444 U	0.444 U	0.444 U	0.444 U	4/15/2008
MW-231M2	3	N	1 U	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	12/5/2007
MW-231M2	3	N	1 U	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	8/28/2007

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-231M2	3	N	1 UJ	0.281 U	0.281 U	0.281 U	0.281 U	0.281 U	0.281 UJ	0.281 U	4/12/2007
MW-231M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/22/2006
MW-231M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/1/2006
MW-231M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2006
MW-231M2	3	FD	0.962 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2005
MW-231M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2005
MW-231M2	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-231M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-231M2	3	N	0.76 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/12/2005
MW-231M2	3	N	0.663 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-231M2	3	N	0.71 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2004
MW-231M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/20/2004
MW-231M2	3	N	0.63 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/11/2004
MW-231M2	3	N	0.582 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1/30/2004
MW-231M2	3	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/6/2003
MW-231M2	3	N	0.6 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/6/2003
MW-231M2	3	N	0.54 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/14/2002
MW-231M2	3	N	1.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/26/2002
MW-231M3	3	N	0.033 J	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	4/21/2011
MW-231M3	3	N	0.0342 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/19/2010
MW-231M3	3	N	1 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	7/29/2009
MW-231M3	3	N	1 UJ	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/15/2009
MW-231M3	3	N	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	12/22/2008
MW-231M3	3	N	1 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	8/29/2008
MW-231M3	3	FD	1 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	4/15/2008
MW-231M3	3	N	1 U	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	4/15/2008
MW-231M3	3	N	1 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	12/6/2007
MW-231M3	3	N	n/a	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 UJ	0.213 U	9/10/2007
MW-231M3	3	N	1 U	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	8/28/2007
MW-231M3	3	N	1 UJ	0.263 U	0.263 U	0.263 U	0.263 U	0.263 U	0.263 U	0.263 U	4/12/2007
MW-231M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/7/2006
MW-231M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/12/2005
MW-231M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2004
MW-231M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/21/2004
MW-231M3	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/11/2004
MW-231M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3/11/2004
MW-231M3	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/2/2004
MW-231M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2/2/2004
MW-231M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/12/2003
MW-231M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/6/2003
MW-231M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/26/2002
MW-240M1	3	N	0.023 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2011
MW-240M1	3	N	0.015 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2010

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2009
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2008
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2007
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/22/2006
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/1/2006
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/6/2006
MW-240M1	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2005
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2005
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2005
MW-240M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-240M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/12/2003
MW-240M1	3	N	1 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	3/5/2003
MW-240M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/12/2002
MW-240M2	3	N	0.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2011
MW-240M2	3	N	0.179	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2010
MW-240M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2009
MW-240M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2008
MW-240M2	3	N	0.228 J	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	4/12/2007
MW-240M2	3	FD	0.275 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/22/2006
MW-240M2	3	N	0.288 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/22/2006
MW-240M2	3	N	0.267 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/2/2006
MW-240M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2006
MW-240M2	3	N	0.343 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2005
MW-240M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-240M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/11/2005
MW-240M2	3	N	0.357 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-240M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-240M2	3	N	0 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2004
MW-240M2	3	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/12/2003
MW-240M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/12/2003
MW-240M2	3	N	1 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	3/5/2003
MW-240M2	3	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/14/2002
MW-240M3	3	N	0.022 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2011
MW-240M3	3	N	0.0264 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2010
MW-240M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/16/2009
MW-240M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2008
MW-240M3	3	N	1 UJ	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	0.272 U	4/12/2007
MW-240M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/6/2006
MW-240M3	3	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/11/2005
MW-240M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/11/2005
MW-240M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-240M3	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	7/29/2004

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-240M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/12/2003
MW-240M3	3	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/6/2003
MW-240M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/6/2003
MW-240M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/14/2002
MW-240M3	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/14/2002
MW-248M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-248M1	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/26/2003
MW-248M1	3	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/19/2003
MW-248M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/6/2003
MW-248M2	3	N	0.149	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2011
MW-248M2	3	N	0.12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2010
MW-248M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2009
MW-248M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2008
MW-248M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/4/2007
MW-248M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2006
MW-248M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2005
MW-248M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-248M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/25/2004
MW-248M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/1/2004
MW-248M2	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/25/2003
MW-248M2	3	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/19/2003
MW-248M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/8/2003
MW-248M3	3	N	0.109	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2011
MW-248M3	3	N	0.255	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2010
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/28/2009
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2009
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/30/2008
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/3/2008
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2008
MW-248M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2007
MW-248M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-248M3	3	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2007
MW-248M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2007
MW-248M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2006
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/7/2006
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2006
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2005
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/12/2005
MW-248M3	3	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2005
MW-248M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2005
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-248M3	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004

Appendix D

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5/25/2004
MW-248M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/2/2004
MW-248M3	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/25/2003
MW-248M3	3	N	2 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/19/2003
MW-248M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/8/2003
MW-252M1	3	N	0.052	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/26/2011
MW-252M1	3	N	0.132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2010
MW-252M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/28/2009
MW-252M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2009
MW-252M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/30/2008
MW-252M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/2/2008
MW-252M1	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2008
MW-252M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2008
MW-252M1	3	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/4/2007
MW-252M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/4/2007
MW-252M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/28/2007
MW-252M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2007
MW-252M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2006
MW-252M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/2/2006
MW-252M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2006
MW-252M1	3	N	0.383 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/16/2005
MW-252M1	3	N	0.41 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2005
MW-252M1	3	N	0.4 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-252M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2003
MW-252M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/8/2003
MW-252M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/26/2003
MW-252M2	3	N	0.064	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/26/2011
MW-252M2	3	N	0.134	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2010
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/28/2009
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2009
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/30/2008
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/2/2008
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2008
MW-252M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/4/2007
MW-252M2	3	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-252M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-252M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2007
MW-252M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2006
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/2/2006
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/6/2006
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/16/2005
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2005

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-252M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/1/2004
MW-252M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/6/2003
MW-252M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/8/2003
MW-252M2	3	N	1 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	2/26/2003
MW-252M3	3	N	0.084	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/26/2011
MW-252M3	3	N	0.141	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2010
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/28/2009
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2009
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/30/2008
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/3/2008
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/11/2008
MW-252M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/4/2007
MW-252M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-252M3	3	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2007
MW-252M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2007
MW-252M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2006
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/2/2006
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/6/2006
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/16/2005
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2005
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2005
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-252M3	3	N	0.43 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-252M3	3	FD	0.41 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/1/2004
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/1/2004
MW-252M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/6/2003
MW-252M3	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/3/2003
MW-252M3	3	N	0.555 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	5/8/2003
MW-252M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/26/2003
MW-258M1	3	N	3.29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/22/2011
MW-258M1	3	N	1.45	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2011
MW-258M1	3	N	1.11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/22/2010
MW-258M1	3	N	0.842	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/17/2010
MW-258M1	3	N	0.776	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2010
MW-258M1	3	N	0.611	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/18/2009
MW-258M1	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/31/2009
MW-258M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/31/2009
MW-258M1	3	N	0.414 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2009
MW-258M1	3	FD	0.569 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/31/2008
MW-258M1	3	N	0.597 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/31/2008
MW-258M1	3	FD	0.506 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/3/2008

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-258M1	3	N	0.52 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/3/2008
MW-258M1	3	N	0.54 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2008
MW-258M1	3	N	0.602 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/4/2007
MW-258M1	3	N	0.605 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-258M1	3	N	0.76 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/30/2007
MW-258M1	3	N	0.442 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/4/2007
MW-258M1	3	N	0.868 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2006
MW-258M1	3	N	0.777 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2006
MW-258M1	3	N	0.759 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2006
MW-258M1	3	N	0.833 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2005
MW-258M1	3	N	0.67 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/29/2005
MW-258M1	3	N	0.68 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/8/2005
MW-258M1	3	N	0.467 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-258M1	3	N	0.39 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-258M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/2/2004
MW-258M1	3	N	0.36 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/24/2003
MW-258M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/12/2003
MW-258M1	3	N	1 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	3/7/2003
MW-258M2	3	N	0.117	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/22/2011
MW-258M2	3	N	0.15	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	4/14/2011
MW-258M2	3	N	0.204	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	12/22/2010
MW-258M2	3	N	0.119	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	8/17/2010
MW-258M2	3	N	0.068	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/21/2010
MW-258M2	3	N	0.079	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	11/18/2009
MW-258M2	3	N	1 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	7/31/2009
MW-258M2	3	N	1 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/14/2009
MW-258M2	3	N	1 U	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	12/31/2008
MW-258M2	3	N	1 U	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	0.217 UJ	9/3/2008
MW-258M2	3	FD	1 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	4/14/2008
MW-258M2	3	N	1 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	4/14/2008
MW-258M2	3	N	1 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	0.22 UJ	12/4/2007
MW-258M2	3	N	1 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	8/31/2007
MW-258M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/30/2007
MW-258M2	3	N	1 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 U	0.269 UJ	0.269 U	4/4/2007
MW-258M2	3	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/20/2006
MW-258M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	12/20/2006
MW-258M2	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/8/2006
MW-258M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/3/2006
MW-258M2	3	N	0.867 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2006
MW-258M2	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/2006
MW-258M2	3	N	1.28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/15/2005
MW-258M2	3	N	1.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/29/2005
MW-258M2	3	N	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/8/2005

Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-258M2	3	N	1.62	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-258M2	3	N	1.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-258M2	3	N	0.9 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/2/2004
MW-258M2	3	N	0.51 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/24/2003
MW-258M2	3	N	0.4 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/12/2003
MW-258M2	3	N	0.408 J	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	3/7/2003
MW-258M3	3	N	0.069	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/22/2011
MW-258M3	3	N	0.056	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	0.222 UJ	4/14/2011
MW-258M3	3	N	0.051	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	12/22/2010
MW-258M3	3	N	0.0424 J	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	8/17/2010
MW-258M3	3	N	0.0359 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/21/2010
MW-258M3	3	N	0.0365 J	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	11/19/2009
MW-258M3	3	N	1 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	7/31/2009
MW-258M3	3	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/15/2009
MW-258M3	3	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	12/31/2008
MW-258M3	3	N	1 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	9/3/2008
MW-258M3	3	N	1 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/14/2008
MW-258M3	3	N	1 UJ	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	0.217 U	12/4/2007
MW-258M3	3	N	1 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	0.227 UJ	8/31/2007
MW-258M3	3	N	1 U	0.278 UJ	0.278 U	0.278 U	0.278 U	0.278 U	0.278 UJ	0.278 U	4/4/2007
MW-258M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	4/5/2006
MW-258M3	3	N	0.46 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/29/2005
MW-258M3	3	FD	1.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/8/2005
MW-258M3	3	N	1.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6/8/2005
MW-258M3	3	N	1.01	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/9/2004
MW-258M3	3	N	0.37 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/29/2004
MW-258M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/2/2004
MW-258M3	3	N	1 UJ	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/24/2003
MW-258M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	6/12/2003
MW-258M3	3	FD	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/7/2003
MW-258M3	3	N	0.49 J	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	3/7/2003
MW-352M1	3	N	0.128	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2011
MW-352M1	3	N	0.138	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/28/2010
MW-352M1	3	N	0.168	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/19/2010
MW-352M1	3	N	0.269	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2010
MW-352M1	3	N	0.169	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/19/2009
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2009
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2009
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/17/2008
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/3/2008
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/9/2008
MW-352M1	3	N	0.232	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	0.206 U	2/1/2008
MW-352M1	3	N	0.619 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2007

Perchlorate and Explosive Chemicals of Concern - Monitoring Well and Extraction Well Data - Inception to Date

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-352M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-352M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/3/2007
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/20/2006
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2006
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/4/2006
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2005
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2005
MW-352M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2005
MW-352M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/3/2004
MW-352M2	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2011
MW-352M2	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/28/2010
MW-352M2	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/19/2010
MW-352M2	3	N	0.031 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2010
MW-352M2	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/19/2009
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2009
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2009
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/17/2008
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/3/2008
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/9/2008
MW-352M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2007
MW-352M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-352M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/3/2007
MW-352M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/21/2006
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/7/2006
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/4/2006
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2005
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2005
MW-352M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/19/2005
MW-352M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/3/2004
MW-352M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2011
MW-352M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/28/2010
MW-352M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/19/2010
MW-352M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2010
MW-352M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/19/2009
MW-352M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2009
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2009
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/17/2008
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/3/2008
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/9/2008
MW-352M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2007
MW-352M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/4/2007
MW-352M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/21/2006

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/7/2006
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/5/2006
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2005
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10/4/2005
MW-352M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2005
MW-352M3	3	FD	1 U	0.25 U	4 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/3/2004
MW-352M3	3	N	1 U	0.25 U	4 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/3/2004
MW-353M1	3	N	0.117	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2011
MW-353M1	3	N	0.155	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2010
MW-353M1	3	N	0.063	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/19/2010
MW-353M1	3	N	0.078	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2010
MW-353M1	3	N	0.113	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/19/2009
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2009
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2009
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/17/2008
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/4/2008
MW-353M1	3	N	0.418 J	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/9/2008
MW-353M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2007
MW-353M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-353M1	3	FD	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/3/2007
MW-353M1	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/3/2007
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/20/2006
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2006
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/4/2006
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/7/2005
MW-353M1	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2005
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2005
MW-353M1	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2005
MW-353M1	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/22/2004
MW-353M2	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2011
MW-353M2	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2010
MW-353M2	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/19/2010
MW-353M2	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2010
MW-353M2	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/19/2009
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2009
MW-353M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2009
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/17/2008
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/4/2008
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/9/2008
MW-353M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2007
MW-353M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-353M2	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/3/2007
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/20/2006

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-353M2	3	FD	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2006
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2006
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/4/2006
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2005
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2005
MW-353M2	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2005
MW-353M2	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/22/2004
MW-353M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2011
MW-353M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/29/2010
MW-353M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/19/2010
MW-353M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/27/2010
MW-353M3	3	N	0.05 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/19/2009
MW-353M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7/30/2009
MW-353M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/13/2009
MW-353M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/17/2008
MW-353M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/4/2008
MW-353M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/9/2008
MW-353M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/3/2007
MW-353M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/31/2007
MW-353M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/3/2007
MW-353M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/20/2006
MW-353M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/4/2006
MW-353M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/4/2006
MW-353M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/19/2005
MW-353M3	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/8/2005
MW-353M3	3	N	1 UJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2005
MW-353M3	3	N	1 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/22/2004
MW-531M1	3	N	0.304	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2011
MW-531M1	3	N	0.313	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/22/2010
MW-531M1	3	N	0.275	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/17/2010
MW-531M1	3	N	0.256	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/21/2010
MW-532M1	3	N	8.62	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/22/2011
MW-532M1	3	FD	6.52	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2011
MW-532M1	3	N	6.36	0.374 J	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	4/14/2011
MW-532M1	3	FD	5.85	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/30/2010
MW-532M1	3	N	5.89	0.177 J	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	0.222 U	12/30/2010
MW-532M1	3	N	5.61	0.219	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	0.208 U	8/17/2010
MW-532M1	3	N	3.19	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	0.202 U	4/19/2010
MW-532M2	3	FD	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/22/2011
MW-532M2	3	N	16.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/22/2011
MW-532M2	3	FD	16.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2011
MW-532M2	3	N	16.8	0.534	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	4/14/2011

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-532M2	3	FD	21.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/30/2010
MW-532M2	3	N	21.2	0.833	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	0.215 U	12/30/2010
MW-532M2	3	FD	7.21	0.246 J	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	0.206 UJ	8/17/2010
MW-532M2	3	N	7.25	0.245 J	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	0.215 UJ	8/17/2010
MW-532M2	3	FD	7.78	0.356	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4/19/2010
MW-532M2	3	N	8.28	0.421	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	0.213 U	4/19/2010
MW-533M1	3	N	0.172	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2011
MW-533M1	3	N	0.164	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/22/2010
MW-533M1	3	N	0.141	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/17/2010
MW-533M1	3	N	0.128	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2010
MW-542M1	3	N	0.188	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/14/2011
MW-542M1	3	N	0.275	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/30/2010
MW-542M1	3	N	0.249	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/17/2010
MW-542M1	3	N	0.303	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/20/2010
MW-543M1	3	N	0.11 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/23/2011
MW-543M1	3	N	0.078 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	11/30/2010
MW-543M2	3	N	0.15 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/23/2011
MW-543M2	3	N	0.12 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/1/2010
MW-544M1	3	FD	3.37	0.26 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	7/20/2011
MW-544M1	3	N	4.14	0.25 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	7/20/2011
MW-544M1	3	N	5.8	1.36 UJ	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/21/2011
MW-544M1	3	N	0.78	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/13/2010
MW-544M2	3	N	0.11 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/22/2011
MW-544M2	3	N	0.3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/10/2010
MW-544M3	3	N	0.072 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/21/2011
MW-544M3	3	N	0.16 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/9/2010
MW-545M1	3	N	4.16	0.37 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/20/2011
MW-545M1	3	N	0.87	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/7/2010
MW-545M2	3	N	7.05	0.5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/16/2011
MW-545M2	3	FD	12	1.06 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/7/2010
MW-545M2	3	N	12.2	1.08 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/7/2010
MW-545M3	3	FD	7.09	0.58 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/16/2011
MW-545M3	3	N	7	0.59 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/16/2011
MW-545M3	3	N	8.96	0.85 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/6/2010
MW-545M4	3	N	2.54	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/16/2011
MW-545M4	3	N	2.94	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/8/2010
MW-546M1	3	N	0.27	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/20/2011
MW-546M1	3	N	0.19 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/13/2010
MW-546M2	3	N	0.19 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/20/2011
MW-546M2	3	N	0.17 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	12/13/2010
MW-554M1	3	N	5.38	0.32 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/29/2011
MW-554M1	3	N	5.09	0.25 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	5/20/2011
MW-554M2	3	N	2.68	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	6/29/2011

Appendix D

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Well	Zone	Sample Type	Perchlorate	RDX	HMX	2A-DNT	4A-DNT	2,4-DNT	2,6-DNT	TNT	Date
MW-554M2	3	N	3.02	0.84 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	5/20/2011
XX9514	3	N	9.59	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/23/2011
XX9514	3	FD	4.23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2011
XX9514	3	N	4.58	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/15/2011
XX9514	3	N	3.85	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12/23/2010
XX9514	3	N	1.24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8/19/2010
XX9514	3	N	0.786	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/22/2010
XX9514	3	N	0.21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11/19/2009
XX9514	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9/16/2009
XX9514	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/10/2008
XX9514	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/10/2008
XX9514	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	10/14/2004
XX9514	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	11/14/2003
XX9514	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/6/2002
XX9514	3	N	1 U	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4/8/2002
XX9514	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/5/2001
XX9514	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	8/28/2000
XX9514	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	9/28/1999
XX9514	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	1/22/1999
XX9514	3	N	n/a	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	2/10/1998

APPENDIX E

PROJECT NOTE DEMO 1 PHASE II OPTIMIZATION IMPLEMENTATION FRANK PERKINS ROAD ETR SYSTEM

Impact Area Groundwater Study Program Camp Edwards, Massachusetts	**Final Project Note**	

Confirmation of ☐ ☐ ☐	Date Held: Not applicable Location: Not applicable Date Issued: February 2011 Recorded By:
Subject **DEMO 1 GW ESPM:** **PHASE 2 OPTIMIZATION IMPLEMENTATION**	Issued By Dave Hill Impact Area Groundwater Study Program

Item	
1.0	**Introduction** This project note summarizes the second phase of optimization of treatment system operations at the Frank Perkins Road Treatment Facility planned as part of the Environmental and System Performance Monitoring (ESPM) program at Demo 1. One year of Phase 1 operations was completed on September 1, 2010. Phase 1 has continued with monthly cycling of extraction wells. When Phase 2 starts, it will return the system to steady-state flow at a rate reduced from the original design conditions. Phase 1 included rolling shut downs of one extraction well at a time in order to allow stagnation zones in between extraction wells to migrate to the next downgradient well. Phase 2 will be a more traditional adjustment of flow rates from all of the wells to better match the capture zones of the wells to the horizontal extent of the plume. Future optimizations to be considered and presented in project notes are vertical reduction of the active screen lengths in some extraction wells to better focus the extraction stresses on the most contaminated portions of the aquifer and further refinement of flow rates to match the plume dimensions. A "Leading Edge" investigation commenced in October 2010 adjacent to the base boundary and consisted of four borings (MW-543 through MW-546) with profile samples collected at 10-foot intervals. Perchlorate concentrations exceeded 2 µg/L from -5 through -100 ft msl at MW-545 and the width of the perchlorate plume is less than 200 feet. A response action is underway to limit further off-post migration of perchlorate, determine if any private wells exist and define the extent of perchlorate contamination downgradient of the base boundary. The remediation timeframe of 2017, as discussed in this project note, does not apply to this portion of the plume.

Item		
2.0	**Summary of Phase 1 - Rolling Extraction Well Shut Downs** Starting on September 1, 2009, extraction well EW-501, the most upgradient extraction well at Demo 1 (see attached Figure 1), was shut down for a period of one month. On October 1, 2009 (approximately), EW-502 was turned off and EW-501 was returned to service. On November 1, 2009 (approximately), EW-1 was shut down and EW-502 was returned to service. This pattern was repeated three more times during the year such that each well was off for 4 one-month periods. Cycling of the extraction wells in this pattern will continue until approval of Phase 2 optimization. There is no direct way to measure the changes within the stagnation zones between wells, but it is expected that there is now only non-contaminated groundwater in the stagnation zones downgradient of wells EW-501, EW-502, and EW-1. Limiting the shut down periods to one month prevented contaminated water from passing beyond the capture zones of the wells. Groundwater modeling simulations indicate that this should accelerate the remediation of the plume by approximately one year. Well EW-503 was not included in Phase 1 optimization measures as concentrations were near the reporting limit of 0.35 µg/L and that concentrations in upgradient monitoring well cluster MW-210 were less than 2 µg/L immediately prior to optimization (June 2009), as such it was felt that optimization would not provide any significant benefit at this juncture. Future optimization will be addressed separately under Phase 2. Extraction well EW-2 at Pew Road was also not recommended for shut down as it is the most downgradient extraction well in the Demo 1 plume and turning it off would only let uncaptured contamination migrate beyond the reach of the treatment systems. Maintenance of the three extraction wells and their down-hole pumps was completed during the shut downs. This included cleaning of the pumps and well screens as needed to efficiently maintain flow. The performance of the pumps in the extraction wells was tested and a new pump curve of head vs. flow was developed for comparison to initial conditions. If a pump was significantly under-performing, maintenance was completed. As recommended in the 2008 ESPM report, sampling the four extraction wells that feed the Frank Perkins Road plant has been completed three times per year (August, December and April). The data from the Phase 1 period will be reported in the 2010 ESPM report (data cutoff dates September 2009-August 2010). Hydraulic readings were collected at each extraction well to measure drawdown at each well. This information can then be used to calibrate the hydraulic conductivity and other values in the model. Results of these data collection efforts will also be included in the 2010 ESPM report.	

Item		
	The groundwater transport model predicted that 3.19 pounds of perchlorate would be removed during the first 12 months of operation under phase 1 cyclic pumping from the FPR system. The actual amount removed, based on flow rates and influent sample concentrations, was 3.21 pounds, a difference of <1%. The total perchlorate removed including the Pew Road was 7.9 pounds. This is compared to a simulated removal of 7.23 pounds, a difference of 9% (Figure 3). This indicates a very good correlation between the model and actual plume conditions for the FPR system.	
3.0	**Phase 2 Optimization** The design flow rates used since start up of the FPR system in 2007 were determined in 2005 based on capture of the perchlorate plume to 1 ppb. Since that time, the remediation goal has changed to 2 ppb and the plume has gotten significantly narrower due to the withdrawal and treatment of over a billion gallons of water by the system. As reported in the 2009 ESPM report, the influent concentrations of both perchlorate and RDX at the FPR plant have dropped considerably since start up which further indicates that more clean water is being drawn into the system as the plume shrinks. The transport model is used to simulate the movement of groundwater and contaminants and to predict changes in concentration over time. Simulations using the transport model which consider flow, mass transport, and relevant attenuation processes. Groundwater simulations using the model show that the design pumping rates for the extraction wells in the FPR system generate capture zones that extend significantly beyond the edges of the plume. This means that clean water is being captured as well as the plume. Figure 1 (top pane) shows the particle tracks generated by the model for each extraction well under design pumping conditions. Each particle track represents 10 years of flow. The transport model indicates that at 500 gpm, the time needed to reach the remedial goal for perchlorate within the reach of the FPR system would be approximately 1 year longer than it would be at the current design flow rate (2015 instead of 2014). However, the Pew Road system would likely still be in operation for several additional years so the overall time to completely remediate the plume is unchanged by the proposed optimization and the proposed phase 2 optimization will not result in the extension of remedial operations for the Demo 1 plume beyond original estimates. Remediation of the perchlorate plume is still expected to be complete by 2017. Particle tracks for the 500 gpm simulation using the transport model are shown in Figure 1 (bottom pane), and capture zones for steady-state conditions under design and 500 gpm are shown as a composite in Figure 2. The proposed Phase 2 optimized pumping rates for each well are specified in Section 4 below. Animations of the design and optimized flow rates will be provided separately.	

Item		

The Demo 1 Decision Document (USEPA 2006) indicated the chosen remedial alternative (Alternative 5 – Additional Alternative A - 5 Well System) would achieve risk based concentrations within 11 years and background within 19 years. The Final Feasibility Study (AMEC 2005), Appendix F identifies that "The perchlorate concentrations portrayed within the dashed lines on Figure F3-2 and F3-3 for year 2017 and after represent plume mass which the model predicts will stagnate within the clay zone. Because this portion of the aquifer is not productive due to low permeability it has not been included in the estimated timeframes for remediation of the plume as summarized in Table 3-1." The transport animation for Alternative 5, which is presented in the Feasibility Study confirms this statement. The same effect regarding contaminants tied up in clay/silt lenses is depicted in the optimized (500 gpm) scenario, and this mass represents less than 0.1% of the initial perchlorate mass.

Figure 3 shows the mass removal curves for the original design flow rates and at an optimized rate of 500 gpm. Both curves start with one year of Phase 1 cyclic pumping. The mass removal curves show that by 2017 the mass removal from the systems under both scenarios are nearly identical, with less than 2% of the 103 pound starting mass of perchlorate remaining in the aquifer.

As mentioned above, EW-503 was not included in Phase 1 optimization. The influent concentrations in this well are quite low, below drinking water criteria, indicating that most of the water entering this well is clean. As part of Phase 2 optimization, extraction well EW-503 will be shut down for a one-month period to allow the groundwater in the stagnation zone downgradient of that well to begin migrating toward EW-2 at Pew Road.

4.0 Phase 2 Pumping Rates

The following table summarizes the flow rates (in gpm) of the original design rates and the revised flow rates that are planned under Phase 2 optimization:

	Total	EW-501	EW-502	EW-1	EW-503
Original Design	808	191	251	161	205
Phase 2	500	150	100	150	100

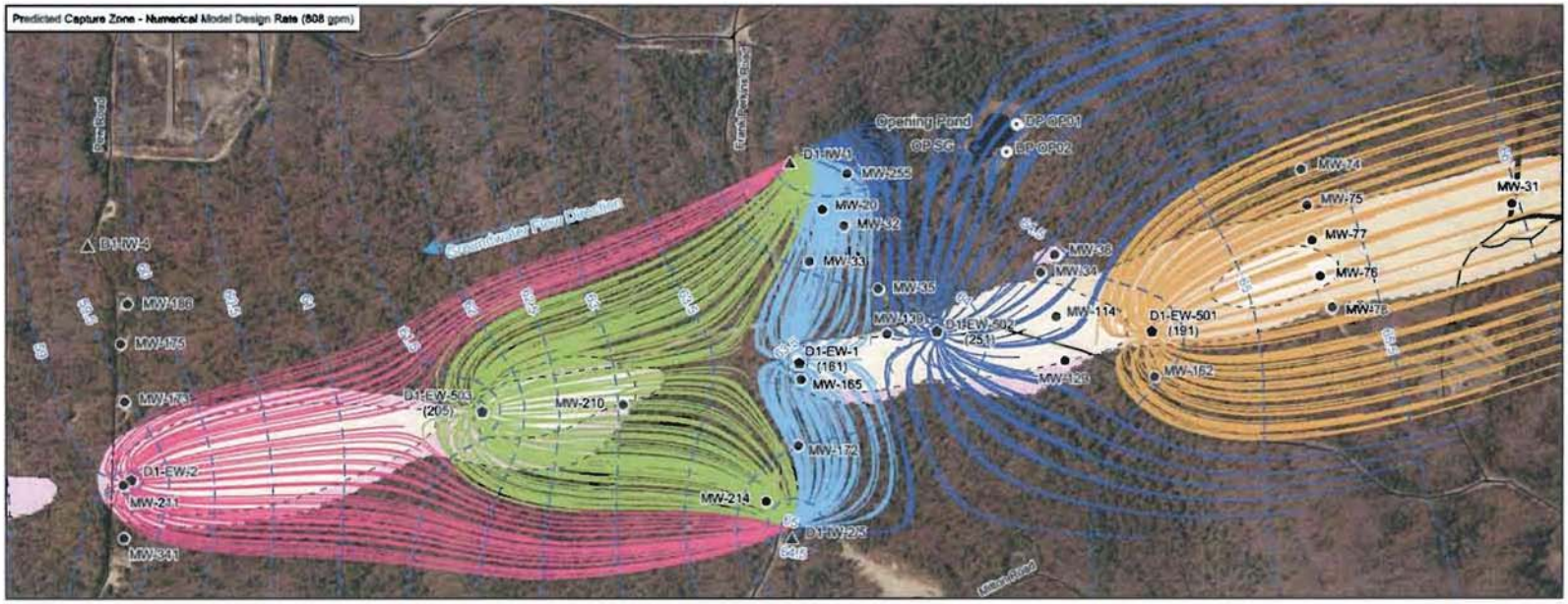
These flow rates will take effect upon approval by the regulatory agencies.

Hydraulic monitoring and extraction well sampling will continue as per the program delineated in the ESPM work plan and reports. The data from the hydraulic monitoring will be used to update the model and determine the capture zones and flow paths under the revised pumping rates. This information and interpretation will be reported in the ESPM reports.

Item		
5.0	**Expected Benefits of Phase 2 Optimization** Reduction of the flow rate at the Frank Perkins Road system from the design rate of 808 gpm to the Phase 2 optimized rate of 500 gpm will still ensure capture of the perchlorate plume at D1-EW-503 and in upgradient extraction wells (D1-EW-1, D1-EW-501, and D1-EW-502) to the Massachusetts perchlorate MCL of 2 µg/L and cleanup timeframes for this portion of the plume is predicted to be increased by one year from system design rates. A short term test of the FPR system was conducted in 2008 to determine the relationship between flow rate and electricity consumption Three flow rates were tried, all using both treatment trains in the FPR plant. The flow rates were 646 gpm, 808 gpm, and 970 gpm. The amount of energy used per unit of flow was the same under all three conditions indicating a linear relationship. Under these conditions the plant consumed 13.6 kW per 100 gpm. Using this relationship, the reduction of flow from 808 gpm to 500 gpm (approximately 300 gpm) should result in 41 kW less electric demand. This equates to a savings of approximately 341,000 kW hours per year. The electric consumption of the 40 HP booster pump that will be eliminated reduces the consumption by another 29 kW for a total of 70 kW or 613,000 kWhours per year. However, the other booster pump will be working a little bit harder to pump 500 gpm instead of its current 404 gpm. The yearly reduction in greenhouse gasses associated with this reduction in electricity use is expected to approach 300 tons, the equivalent of 75 single family homes. The reduction in electricity use will save up to $110,000 per year. In addition, a flow rate of 500 gpm can be accommodated by one treatment train in the FPR plant which should reduce consumption of filter media. This leaves approximately 500 gpm of spare capacity for future use if needed.	
6.0	**Signatures** The signatures below represent concurrence with the above documentation: 2/10/2011 EPA Representative 2/10/2011 MassDEP Representative 2/10/11 Impact Area Groundwater Study Program	
7.0	**Attachments** **FIGURES:** Figure 1: 10 Year Simulated Capture Zones – Numerical Model 500 gpm and	

Item		
	Design Conditions 808 gpm Figure 2: Overlays of 10 Year Simulated Capture Zones - Numerical Model 500 gpm and Design Conditions (808 gpm) Figure 3: Perchlorate Mass Removal at Design Flow Rate (808 gpm) and Optimized Rate (500 gpm) **Reference:** AMEC. 2005. Final Technical Team Memorandum 01-17 Demolition Area 1 Groundwater Feasibility Study (TM 01-17), AMEC Earth and Environmental, Inc., Westford, Massachusetts, August 19, 2005. USACE. 2010: Final Demolition Area 1 Environmental and System Performance Monitoring Report, Response Action Groundwater Treatment Systems, September 2008 to August 2009, U.S. Army Corp of Engineers, December 15, 2010. USEPA. 2006: Decision Document Demolition Area 1 Groundwater Operable Unit, U.S. Environmental Protection Agency, November 1, 2006.	

ATTACHMENTS



Impact Area Groundwater Study Program

LEGEND

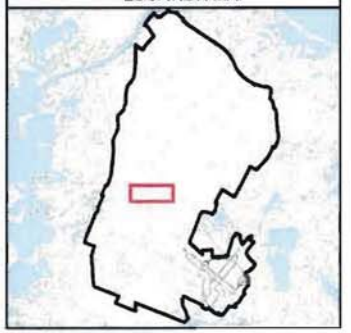
- Monitoring Well
- Piezometer
- Staff Gauge
- Extraction Well
- Injection Well
- (100) Extraction Well Flow Rate - gpm
- Perchlorate Plume > 2ppb
- RDX Plume > 0.6 ppb
- Model-Simulated Groundwater Elevation Contours Under Specified Pumping Conditions

Model-Simulated Streamlines defining Capture Zone

- D1-EW-1
- D1-EW-2
- D1-EW-501
- D1-EW-502
- D1-EW-503

Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through April 2009. Contour lines dashed where inferred.

LOCATION MAP



NOTES & SOURCES

Basemap data from US Geological Survey 7 1/2 minute Topographic Maps. Source: MassGIS
Aerial Photos: Color Digital Orthophotos
Date Flown: 2002 Source: EarthData International

TITLE

10 Year Simulated Capture Zones
Numerical Flow Model
500 gpm and Design Condition 808 gpm

0 500 Feet

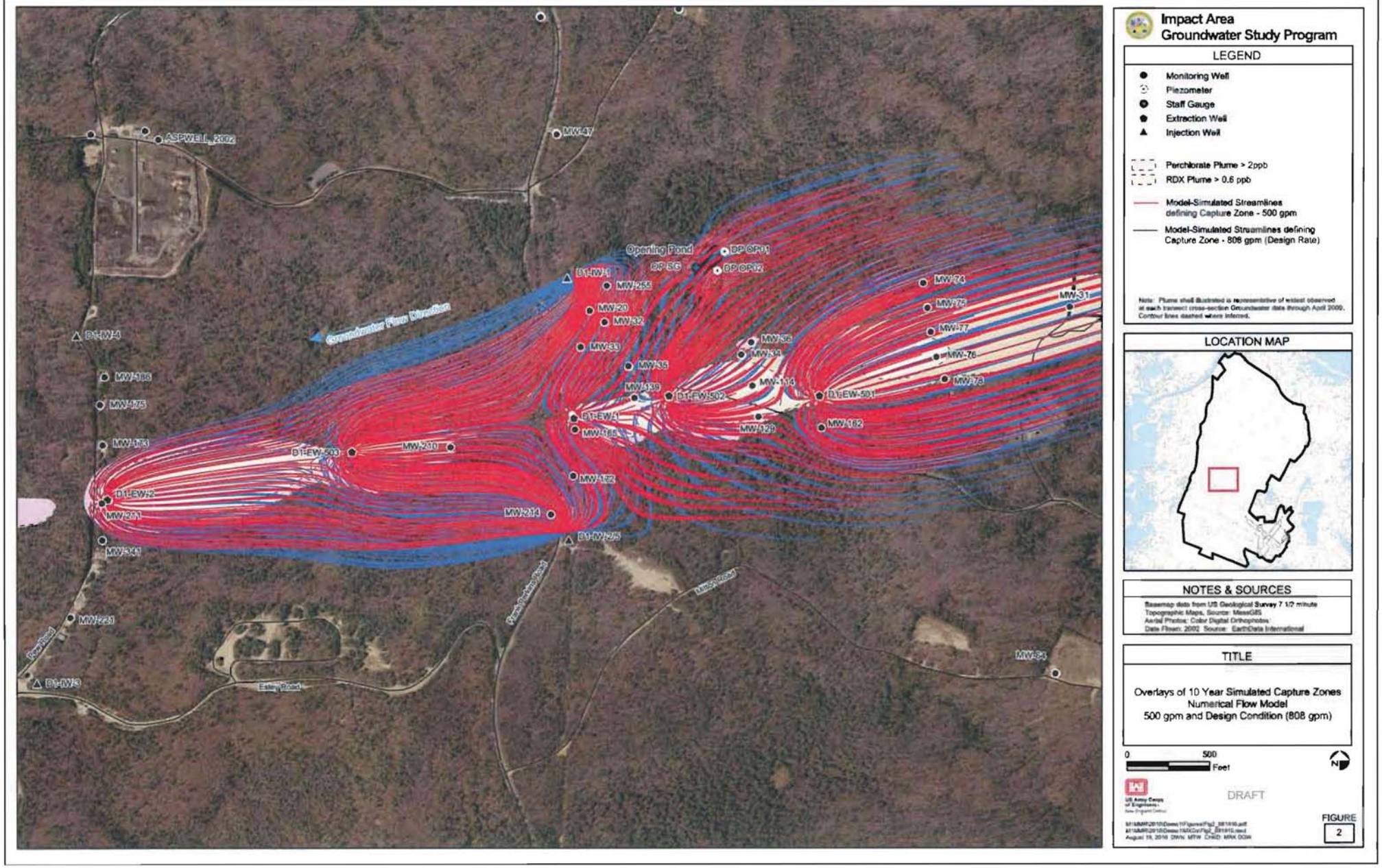
N

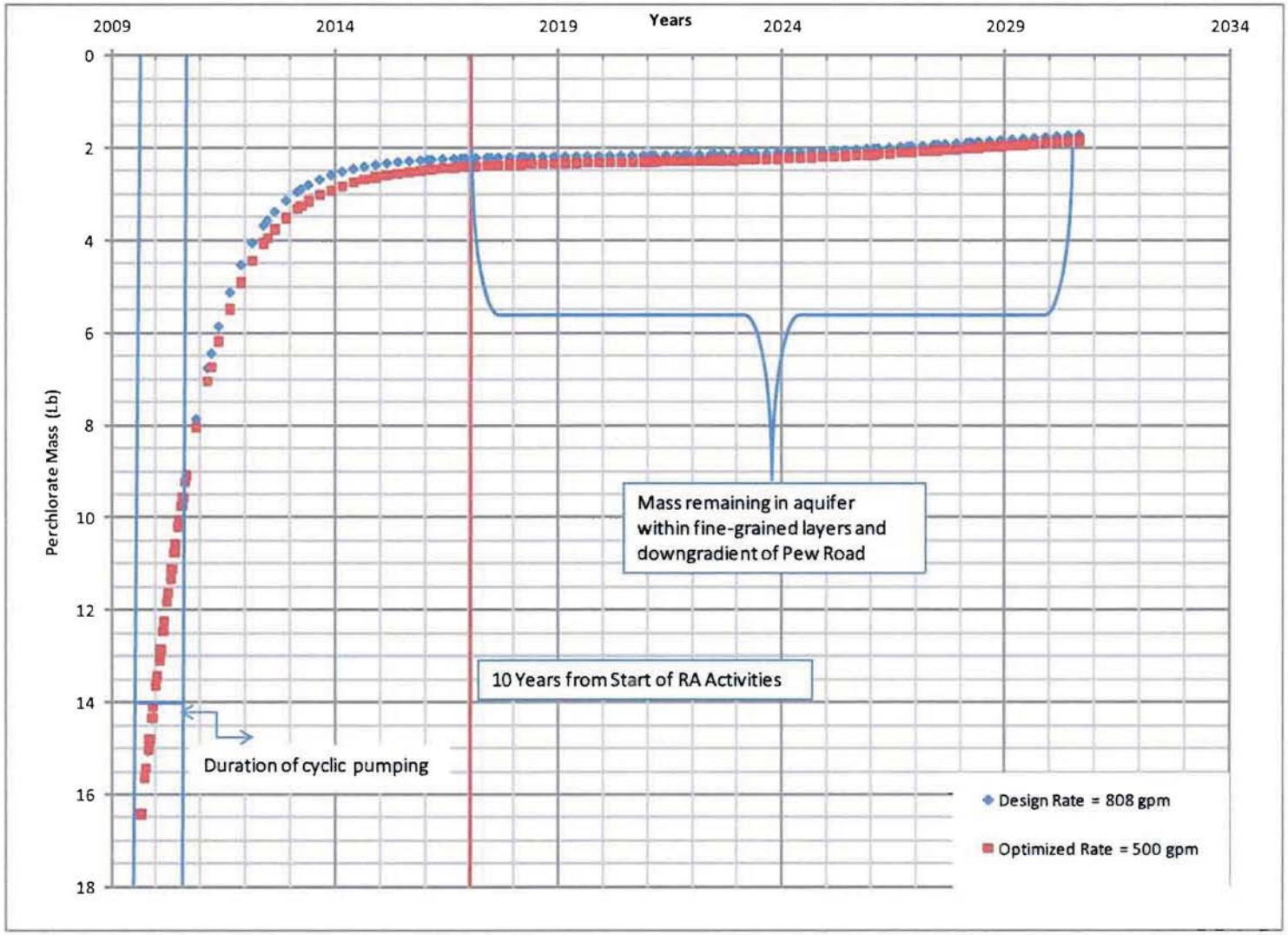
US Army Corps of Engineers

DRAFT

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August 19, 2010 DWN: MTW CHKD: MRK DGN

FIGURE 1


ASPWELL_2002
MW-47
Opening Pond
DP-OP-01
DP-SC
DP-OP-02
D1-IW-1
MW-255
MW-20
MW-32
MW-33
MW-35
MW-139
D1-IW-4
Groundwater Flow Direction
MW-186
MW-475
MW-173
D1-EW-503
MW-230
D1-EW-2
MW-211
MW-214
MW-172
D1-EW-1
MW-185
D1-EW-502
MW-114
MW-129
D1-EW-501
MW-182
MW-24
MW-74
MW-31
MW-77
MW-36
MW-34
MW-76
MW-73
MW-341
MW-231
D1-IW-3
Ester Road
Impact Area Groundwater Study Program
LEGEND
Monitoring Well
Piezometer
Staff Gauge
Extraction Well
Injection Well
Perchlorate Plume > 2ppb
RDX Plume > 0.6 ppb
Model-Simulated Streamlines defining Capture Zone - 500 gpm
Model-Simulated Streamlines defining Capture Zone - 808 gpm (Design Rate)
Note: Plume shell illustrated is representative of widest observed at each transect cross-section Groundwater data through April 2009. Contour lines dashed where inferred.
LOCATION MAP
NOTES & SOURCES
Basemap data from US Geological Survey 7 1/2 minute Topographic Maps, Source: MassGIS
Aerial Photos: Color Digital Orthophotos
Date Flown: 2002 Source: EarthData International
TITLE
Overlays of 10 Year Simulated Capture Zones
Numerical Flow Model
500 gpm and Design Condition (808 gpm)
0
500
Feet
N
US Army Corps of Engineers
New England District
DRAFT
FIGURE
2



US Army Corps of Engineers
New England District

TITLE
Perchlorate Mass Removal at Design Flow Rate (808 gpm) and Optimized Rate (500 gpm)

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M:\MMR\2010\Demo1\MXDs\Fig3_082010.mxd
August 20, 2010 DWN: MTW CHKD: MRK

Impact Area Groundwater Study Program

FIGURE 3

APPENDIX F

Memorandum of Resolution to US Environmental Protection Agency

And

Massachusetts Department of Environmental Protection Comments on the

Draft Demolition Area 1 System Performance Monitoring Report
September 2010 to August 2011, 18 May 2012

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

May 18, 2012

Engineering/Planning Division
Geo-Environmental Engineering Branch

Ms. Lynne Jennings
EPA – New England, Region 1
5 Post Office Square – Suite 100
Mail Code OSRR7-3
Boston, Massachusetts 02109-3912

Mr. Len Pinaud
Massachusetts Department of Environmental Protection
20 Riverside Drive
Lakeville, Massachusetts 02347

Re: Impact Area Groundwater Study Program
USEPA Region I Administrative Orders SDWA 1-97-1019 & 1-2000-0014
Memorandum of Resolution Meeting for the Draft Demolition Area 1 Environmental and System Performance Monitoring Report, Response Action Groundwater Treatment Systems, September 2010 to August 2011

Dear Ms. Jennings and Mr. Pinaud:

On behalf of the Army National Guard Impact Area Groundwater Study Program (IAGWSP), the U.S. Army Corps of Engineers (USACE) held a Comment Resolution Meeting (CRM) for the Response to Comments on the Draft Demolition Area 1 Environmental and System Performance Monitoring Report, Response Action Groundwater Treatment Systems, September 2010 to August 2011, dated March 2012. Comments were received from U.S. Environmental Protection Agency (EPA) in a letter dated April 9, 2012, and from the Massachusetts Department of Environmental Protection (MassDEP) in a letter dated April 11, 2012. EPA requested a CRM to resolve Comment 3. The CRM was held on May 17, 2012. The Memorandum of Resolution (MOR) is enclosed. MassDEP concurred with the RCL in a letter dated May 10, 2012.

Please contact Dave Hill of the IAGWSP office or Mark Anderson of USACE if there are any questions.

Sincerely,

H. Farrell McMillan, P.E.
Chief, Engineering/Planning Division

Enclosure

Printed on Recycled Paper

Hard Copy:
EPA - MassDEP & Bob Lim

Copy Furnished (electronic only):
IAGWSP: Ben Gregson, Dave Hill, Marcia Goulet
USACE: Jay Ehret, Mike Kulbersh, Dan Groher, Mark Anderson, Marie Wojtas
EPA: Erin Sanborn

Impact Area Groundwater Study Program
Memorandum of Resolution to US Environmental Protection Agency and Massachusetts Department of Environmental Protection Comments on the Draft Demolition Area 1 System Performance Monitoring Report September 2010 to August 2011

Subsequent Comment from US Environmental Protection Agency via E-Mail of 16 May 2012

Page-specific Comments:

3 Page 7-2, Section 7.2 - In light of the new data requiring an increase in the operating extraction rate at Dl-EW-3, EPA is concerned that plume cut-off is not being fully achieved at the base boundary. Please separate out and prepare a project note presenting the synoptic water level data under the increased pumping conditions and an analysis of the capture zone and submit to the regulatory agencies as soon as available rather than waiting for the next annual report.

Response: The Base Boundary extraction well, D1-EW-3, flow rate was increased to the existing system capacity on 15 February 2012. Water levels at this rate were collected on 29 February, 21 March, 24 April, and presently water levels will be collected towards the end of May and June 2012. Thereafter, water levels will be collected on a semi-annual basis (Spring and late Fall) in accordance with the recommendations presented in the Draft Demo 1 Annual Report (March 2012). The IAGWSP plans on interpreting the results of this data and determine the effects that the change in pumping rates has on groundwater flow and on system capture. A Project Note presenting the results of the analysis will be presented by September 2012.

Additional Comment: As part of the Draft Demo 1 Enforceable Milestones letter, it was decided to fold the evaluation of D1-EW-3 as part of the technical memorandum for the leading edge of the Demo 1 plume off-site alternatives analysis.

Resolution: Based on our current assumptions and schedule for field activities, a draft Technical Memorandum with alternatives analysis for the off-base portion of the plume will be completed by 1 October 2012. The FS alternatives will be discussed in advance with the regulatory agencies. The technical memorandum will include an evaluation of the base boundary extraction well (D1-EW-3), which will be an integral component of each alternative considered for cleanup of the off base portion of the Demo-1 plume.

APPENDIX G

Project Note – Demolition Area 1 Optimized Hydraulic and Chemical Monitoring Networks

PROJECT NOTE

Client, Project and Location:
Impact Area Groundwater Study Program
Demolition Area 1 Monitoring Networks
Camp Edwards, MA

Subject: **Demolition Area 1 Optimized Hydraulic and Chemical Monitoring Networks**

Date: April 30, 2012

PURPOSE

The purpose of this Project Note (PN) is to document agency concurrence with modifications to the Demolition Area 1 hydraulic and chemical monitoring well networks. Modifications to the monitoring networks were proposed in the Draft Demolition Area 1 Environmental and System Performance Monitoring Report – September 2010 to August 2011, dated March 2012.

Hydraulic Monitoring Optimization

The draft report and the RCL resolved the frequency and wells in the hydraulic monitoring well network. Wells gauged as part of the Frank Perkins Road and Pew Road systems will be gauged annually in spring concurrent with the annual chemical monitoring program. Wells located downgradient of Pew Road are now part of the Base Boundary hydraulic monitoring network and will be gauged semi-annually (spring and late fall). Table 8-1 identifies the approved optimized Hydraulic Monitoring Plan.

Chemical Monitoring Optimization

The draft report and the RCL resolved the sample frequency for perchlorate, explosives and metals. Table 8-2 has been updated to identify the wells for which optimization was approved. Those wells for which optimization will occur are highlighted.

Client, Project and Location:
Impact Area Groundwater Study Program - National Guard Bureau
~~[redacted]~~ Demo-1 Monitoring Networks
Camp Edwards, MA

CONCURRENCE

Concurrences with the recommendations presented in this project note are represented by the signatures below:

5/10/12.

USEPA Representative

May 17, 2012

MassDEP Representative

MAY 16, 2012

IAGWSP Representative

Attachments:

Table 8-1	Approved Hydraulic Monitoring Network
Table 8-2	Approved Chemical Monitoring Schedule

TABLES

Table 8-1
Approved Hydraulic Monitoring Network

Annual Environmental and System Performance Monitoring Plan
Demo 1 Groundwater Operable Unit

Well ID	Screen ID	Ground Elevation (ft bgs)	Top PVC or Steel Casing Elevation (ft NGVD)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Top of Screen Elevation (ft NGVD)	Bottom of Screen Elevation (ft NGVD)	Midscreen Elevation (ft NGVD)	Frequency of Measurements Per Year
Frank Perkins Road System									
D1-EW-1	NA	145	145.10	109	199	36.0	-54.0	-9.0	1
D1-EW-501	NA	148	147.15	88	188	60.0	-40.0	10.0	1
D1-EW-502	NA	138	149.92	88	188	50.0	-50.0	0.0	1
D1-EW-503	NA	178	175.22	148	228	30.0	-50.0	-10.0	1
D1-IW-1	NA	166	164.39	220	320	-54.0	-154.0	-104.0	1
D1-IW-5	NA	155	153.80	110	195	45.0	-40.0	2.5	1
MW-46	D	226	225.56	295	305	-69.0	-79.0	-74.0	1
	M1	226	225.56	262	272	-36.0	-46.0	-41.0	1
	M2	226	225.55	215	225	11.0	1.0	6.0	1
	M3	226	226.01	182	192	44.0	34.0	39.0	1
	S	226	226.06	154	164	72.0	62.0	67.0	1
MW-47	S	161	163.56	90	100	71.0	61.0	66.0	1
	M3	161	163.69	115	125	46.0	36.0	41.0	1
	M2	161	163.79	132	142	29.5	19.5	24.5	1
MW-64	M2	160	159.45	100	105	60.0	55.0	57.5	1
MW-79	M1	159	158.45	156	166	3.0	-7.0	-2.0	1
	M2	159	158.45	116	126	43.0	33.0	38.0	1
	S	159	158.47	89	99	70.0	60.0	65.0	1
MW-32	S	163	164.63	147	152	16.5	11.5	14.0	1
	M	163	164.62	162	172	1.5	-8.5	-3.5	1
	D	163	164.65	182	187	-18.5	-23.5	-21.0	1
MW-33	S	164	163.34	147	152	17.5	12.5	15.0	1
	M	164	163.34	162	172	2.5	-7.5	-2.5	1
	D	164	163.35	182	187	-17.5	-22.5	-20.0	1
MW-34	M3	145	144.69	111	121	34.0	24.0	29.0	1
	M2	145	144.55	131	141	14.0	4.0	9.0	1
	M1	145	144.39	151	161	-6.0	-16.0	-11.0	1
MW-35	S	154	153.63	84	94	70.0	60.0	65.0	1
	M2	154	153.64	100	110	54.0	44.0	49.0	1
	M1	154	153.63	155	165	-1.0	-11.0	-6.0	1
MW-36	S	143	143.04	73	83	70.0	60.0	65.0	1
	M2	143	143.03	131	141	12.0	2.0	7.0	1
MW-114	M2	147	146.37	120	130	27.0	17.0	22.0	1
	M1	147	146.35	177	187	-30.0	-40.0	-35.0	1
MW-129	M3	136	135.85	96	106	40.0	30.0	35.0	1
	M2	136	135.89	116	126	20.0	10.0	15.0	1
	M1	136	135.88	136	146	0.0	-10.0	-5.0	1
MW-162	M3	140	139.81	86	96	54.5	44.5	49.5	1
	M2	140	139.75	126	136	14.5	4.5	9.5	1
	M1	140	139.71	191	201	-50.5	-60.5	-55.5	1
MW-139	M3	149	148.58	119	129	30.0	20.0	25.0	1
	M2	149	148.57	154	164	-5.0	-15.0	-10.0	1
	M1	149	148.48	194	204	-45.0	-55.0	-50.0	1
MW-165	M3	143	142.66	95	105	48.5	38.5	43.5	1
	M2	143	142.73	125	135	18.5	8.5	13.5	1
	M1	143	142.72	185	195	-41.5	-51.5	-46.5	1
MW-172	M3	128	127.56	109	119	19.0	9.0	14.0	1
	M2	128	127.51	169	179	-41.0	-51.0	-46.0	1
	M1	128	127.51	199	209	-71.0	-81.0	-76.0	1
MW-210	M3	162	161.14	121	131	41.0	31.0	36.0	1
	M2	162	161.10	156	166	6.0	-4.0	1.0	1
	M1	162	161.10	201	211	-39.0	-49.0	-44.0	1
MW-214	M3	147	146.81	140	150	7.0	-3.0	2.0	1
	M2	147	146.81	165	175	-18.0	-28.0	-23.0	1
	M1	147	146.82	198	208	-51.0	-61.0	-56.0	1

Table 8-1
Approved Hydraulic Monitoring Network

Annual Environmental and System Performance Monitoring Plan
Demo 1 Groundwater Operable Unit

Well ID	Screen ID	Ground Elevation (ft bgs)	Top PVC or Steel Casing Elevation (ft NGVD)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Top of Screen Elevation (ft NGVD)	Bottom of Screen Elevation (ft NGVD)	Midscreen Elevation (ft NGVD)	Frequency of Measurements Per Year
MW-255	M3	167	166.84	136	146	31.0	21.0	26.0	1
	M2	167	166.79	170	180	-3.0	-13.0	-8.0	1
	M1	167	166.93	206	216	-39.0	-49.0	-44.0	1
MW-73	S	109	124.72	39	48	70.49	60.99	65.7	1
MW-74	M1	163	162.1	170	180	-7.46	-17.46	-12.5	1
	M2	163	162.13	125	135	37.55	27.55	32.6	1
	M3	163	162.13	100	110	62.54	52.54	57.5	1
MW-75	M1	150	149.26	140	150	10.06	0.06	5.1	1
	M2	150	149.36	115	125	35.06	25.06	30.1	1
	S	150	149.32	81	91	69.06	59.06	64.1	1
MW-76	M1	136	135.28	125	135	11.06	1.06	6.1	1
	M2	136	135.36	105	115	31.06	21.06	26.1	1
	S	136	135.36	85	95	51.06	41.06	46.1	1
MW-77	M1	151	150.87	180	190	-28.59	-38.59	-33.6	1
	M2	151	150.91	120	130	31.41	21.41	26.4	1
	S	151	150.88	83	93	68.41	58.41	63.4	1
MW-78	M3	146	145.90	85	95	61.0	51.0	56.0	1
	M2	146	145.70	115	125	31.0	21.0	26.0	1
	M1	146	145.90	135	145	11.0	1.0	6.0	1
Pew Road RA ETR System									
EW-D1-2	NA	200	197.31	175	215	25.0	-15.0	5.0	1
IW-D1-3	NA	201	201.19	165	245	36.0	-44.0	-4.0	1
IW-D1-4	NA	168	166.29	115	165	53.0	3.0	28.0	1
MW-173	M3	193	192.57	188	198	5.0	-5.0	0.0	1
	M2	193	192.59	208	218	-15.0	-25.0	-20.0	1
	M1	193	192.57	243	253	-50.0	-60.0	-55.0	1
MW-175	M3	184	184.14	162	167	22.0	17.0	19.5	1
	M2	184	184.15	199	209	-15.0	-25.0	-20.0	1
	M1	184	184.11	264	274	-80.0	-90.0	-85.0	1
MW-186	M2	181	180.42	182	192	-1.1	-11.1	-6.1	1
	M1	181	180.44	202	212	-21.1	-31.1	-26.1	1
MW-211	M3	200	199.71	150	160	50.0	40.0	45.0	1
	M2	200	199.72	175	185	25.0	15.0	20.0	1
	M1	200	199.73	200	210	0.0	-10.0	-5.0	1
MW-221	M3	202	200.97	156	166	46.0	36.0	41.0	1
	M2	202	200.93	178	188	24.0	14.0	19.0	1
	M1	202	201.02	221	231	-19.0	-29.0	-24.0	1
MW341	M4	218	217.78	182	187	36.5	31.5	34.0	1
	M3	218	218.38	210	220	8.5	-1.5	3.5	1
	M2	218	218.00	270	265	269.5	-46.5	111.5	1
	M1	218	217.91	290	300	-71.5	-81.5	-76.5	1
Base Boundary ETR System									
D1-EW-3		60.51	62.1	72	172	-9.49	-109.49	-59.5	2
PZD1001		70.38	72.59	19	29	51.38	41.38	46.4	2
MW-225	M3	152	151.89	125	135	27.0	17.0	22.0	2
	M2	152	151.86	145	155	7.0	-3.0	2.0	2
	M1	152	151.88	175	185	-23.0	-33.0	-28.0	2
MW-231	M3	161	160.21	116	126	45.5	35.5	40.5	2
	M2	161	160.22	166	176	-4.5	-14.5	-9.5	2
	M1	161	160.08	211	221	-49.5	-59.5	-54.5	2
MW-240	M3	151	150.54	105	115	46.0	36.0	41.0	2
	M2	151	150.55	125	135	26.0	16.0	21.0	2
	M1	151	150.55	198	208	-47.0	-57.0	-52.0	2

Table 8-1
Approved Hydraulic Monitoring Network

Annual Environmental and System Performance Monitoring Plan
Demo 1 Groundwater Operable Unit

Well ID	Screen ID	Ground Elevation (ft bgs)	Top PVC or Steel Casing Elevation (ft NGVD)	Top of Screen Depth (ft bgs)	Bottom of Screen Depth (ft bgs)	Top of Screen Elevation (ft NGVD)	Bottom of Screen Elevation (ft NGVD)	Midscreen Elevation (ft NGVD)	Frequency of Measurements Per Year
MW-248	M3	161	160.68	143	153	18.0	8.0	13.0	2
	M2	161	160.64	178	188	-17.0	-27.0	-22.0	2
	M1	161	160.67	161	216	0.3	-55.3	-27.5	2
MW-252	M3	162	161.34	115	125	47.0	37.0	42.0	2
	M2	162	161.34	145	155	17.0	7.0	12.0	2
	M1	162	161.38	174	184	-12.0	-22.0	-17.0	2
MW-258	M1	92	92.05	109	119	-16.9	-26.9	-21.9	2
	M2	92	92.04	87	92	5.1	0.1	2.6	2
	M3	92	91.96	77	82	15.1	10.1	12.6	2
MW-352	M1	65	64.2	44	46	-50.36	-60.36	-55.4	2
	M2	65	64.26	65	75	-0.36	-10.36	-5.4	2
	M3	65	64.28	43	53	21.64	11.64	16.6	2
MW-353	M1	56	55.73	107	117	-50.98	-60.98	-56.0	2
	M2	56	55.67	57	67	-0.98	-10.98	-6.0	2
	M3	56	55.59	35	45	21.02	11.02	16.0	2
MW-531	M1	93	93.17	138	148	-44.84	-54.84	-49.8	2
MW-532	M1	110	110.44	168	178	-57.55	-67.55	-62.6	2
	M2	110	110.32	138	148	-27.55	-37.55	-32.6	2
MW-533	M1	110	110.30	160	170	-49.64	-59.64	-54.6	2
MW-542	M1	117	116.59	144	154	-27.19	-37.19	-32.2	2
MW-543	M1	58.3	57.8	127	137	-68.7	-78.7	-73.7	2
	M2	58.3	57.83	93	102	-34.7	-43.7	-39.2	2
MW-544	M1	73.7	73.22	162	172	-88.3	-98.3	-93.3	2
	M2	73.3	72.78	112	122	-38.7	-48.7	-43.7	2
	M3	73.7	73.22	77	87	-3.3	-13.3	-8.3	2
MW-545	M1	62.8	62.21	162	172	-99.2	-109.2	-104.2	2
	M2	62.7	62.17	142	152	-79.3	-89.3	-84.3	2
	M3	62.8	62.21	102	112	-39.2	-49.2	-44.2	2
	M4	62.7	62.17	72	82	-9.3	-19.3	-14.3	2
MW-546	M1	62.8	62.31	140	150	-77.2	-87.2	-82.2	2
	M2	62.8	62.28	100	110	-37.2	-47.2	-42.2	2
MW-554	M1	54.3	54.95	120	130	-65.7	-75.7	-70.7	2
	M2	54.3	54.95	90	100	-35.7	-45.7	-40.7	2
XX9514		56.9	58.66	102	112	-45.1	-55.1	-50.1	2
BHW5030020		58.1	59.79	18	20	39.96	38	39.0	2
MW-556	M1	49.60	49.54	153	163	-103.4	-113.4	-108.4	2
	M2	49.60	49.53	111	121	-61.4	-71.4	-66.4	2
MW-558	M1	55.83	55.62	134	144	-78.17	-88.17	-83.2	2
	M2	55.83	55.59	98	108	-42.17	-52.17	-47.2	2
MW-559	M1	51.01	50.78	136	146	-84.59	-94.59	-89.6	2
	M2	51.01	50.82	87	97	-35.99	-45.99	-41.0	2
North Pond	NA	NA	50.16	NA	NA	NA	NA	NA	2
South Pond	NA	NA	47.79	NA	NA	NA	NA	NA	2
West Pond	NA	NA	43.87	NA	NA	NA	NA	NA	2

Notes:

ft bgs = Feet below ground surface

All elevation measurements in feet NGVD (National Geodetic Vertical Datum) of 1929.

Injection and extraction well monitoring point elevations are for the drop tube located within the well.

Water Levels collectted 1x/year will be in Spring (April) and those 2x/yr will be Spring (April) and Fall (December)

NA = Not Applicable

denotes addition to or changes in frequency to the hydraulic monitoring frequency

Table 8-2
Approved Chemical Monitoring Schedule

Demolition Area 1 - 2011 Annual Monitoring Report

Well	Zone	Perchlorate Sampling Rounds/Year	Proposed Perchlorate Frequency	RDX Sampling Rounds/Year	Proposed RDX Frequency	Metals Sampling Rounds/Year[(1)]	Metals Sampling Rounds/Year	April Sampling Round	August Sampling Round	December Sampling Round
MW-114M1	1	2	1	2	1			P,E		
MW-114M2	1	2	1	2	1			P,E		
MW-129M1	1	1		1				P,E		
MW-129M2	1	2	1	2	1			P,E		
MW-129M3	1	1		1				P,E		
MW-139M1	1	1		1	0			P		
MW-139M2	1	1		2	1			P,E		
MW-162M2	1	1		0				P		
MW-165M1	1	1		1				P,E		
MW-165M2	1	2	1	2	1			P,E		
MW-172M2	1	1		0				P		
MW-19S	1	0		2		1	0	E		E
MW-255M2	1	1		0				P		
MW-31M	1	1		2				P,E		E
MW-31S	1	1		2				P,E		E
MW-34M1	1	1		1				P,E		
MW-34M2	1	1		1				P,E		
MW-36M1	1	1		0				P		
MW-36M2	1	1		1				P,E		
MW-73S	1	1		2		1	0	P,E		E
MW-75M1	1	1		1				P,E		
MW-75M2	1	1		1				P,E		
MW-76M1	1	1		1				P,E		
MW-76M2	1	2	1	2				P,E		E
MW-76S	1	1		1				P,E		
MW-77M1	1	1		1				P,E		
MW-77M2	1	2	1	2				P,E		E
MW-77S	1	1		1				P,E		
MW-78M1	1	1		1				P,E		
MW-78M2	1	1		1				P,E		
D1-EW-1	1	3		3				P,E	P,E	P,E
D1-EW-501	1	3		3				P,E	P,E	P,E
D1-EW-502	1	3		3				P,E	P,E	P,E
MW-210M1	2	1		1				P,E		

Table 8-2
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Demolition Area 1 - 2011 Annual Monitoring Report

Well	Zone	Perchlorate Sampling Rounds/Year	Proposed Perchlorate Frequency	RDX Sampling Rounds/Year	Proposed RDX Frequency	Metals Sampling Rounds/Year[(1)]	Metals Sampling Rounds/Year	April Sampling Round	August Sampling Round	December Sampling Round
MW-210M2	2	1		1				P,E		
MW-210M3	2	1		1				P,E		
MW-211M1	2	2		2				P,E		P, E
MW-211M2	2	2	1	2	1			P,E		
MW-341M4	2	1		1				P,E		
MW-341M3	2	2		1				P,E		P
MW-341M2	2	1		0				P		
D1-EW-503	2	3		3				P,E	P,E	P,E
MW-225M2	3	3	1	3	1			P,E		
MW-225M3	3	3	1	3	1			P,E		
MW-240M1	3	1		0				P		
MW-240M2	3	1		0				P		
MW-240M3	3	1		0				P		
MW-248M2	3	1		0				P		
MW-248M3	3	1		0				P		
MW-252M1	3	1		0				P		
MW-252M2	3	1		0				P		
MW-252M3	3	1		0				P		
MW-258M1	3	3		0	1			P,E	P	P
MW-258M2	3	3	1	3	1			P,E		
MW-258M3	3	3	1	3	1			P,E		
MW-352M1	3	1		0				P		
MW-352M2	3	1		0				P		
MW-353M1	3	1		0				P		
MW-353M2	3	1		0				P		
MW-531M1	3	1		0				P		
MW-532M1	3	3		3	1			P,E	P	P
MW-532M2	3	3		3				P,E	P,E	P,E
MW-542M1	3	1		0				P		
95-14	3	3		0				P	P	P
MW-543M1	3	n/a	2	n/a	2			P,E		P,E
MW-543M2	3	n/a	2	n/a	2			P,E		P,E
MW-544M1	3	n/a	2	n/a	2			P,E		P,E
MW-544M2	3	n/a	2	n/a	2			P,E		P,E

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Demolition Area 1 - 2011 Annual Monitoring Report

Well	Zone	Perchlorate Sampling Rounds/Year	Proposed Perchlorate Frequency	RDX Sampling Rounds/Year	Proposed RDX Frequency	Metals Sampling Rounds/Year[(1)]	Metals Sampling Rounds/Year	April Sampling Round	August Sampling Round	December Sampling Round
MW-544M3	3	n/a	2	n/a	2			P,E		P,E
MW-545M1	3	n/a	2	n/a	2			P,E		P,E
MW-545M2	3	n/a	2	n/a	2			P,E		P,E
MW-545M3	3	n/a	2	n/a	2			P,E		P,E
MW-545M4	3	n/a	2	n/a	2			P,E		P,E
MW-546M1	3	n/a	2	n/a	2			P,E		P,E
MW-546M2	3	n/a	2	n/a	2			P,E		P,E
MW-554M1	3	n/a	2	n/a	2			P,E		P,E
MW-554M2	3	n/a	2	n/a	2			P,E		P,E
MW-556M1	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-556M2	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-558M1	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-558M2	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-559M1	3	n/a	3	n/a	3			P,E	P,E	P,E
MW-559M2	3	n/a	3	n/a	3			P,E	P,E	P,E

NOTES:

1. P = Perchlorate; E = Explosives, M = Metals
n/a = not applicable